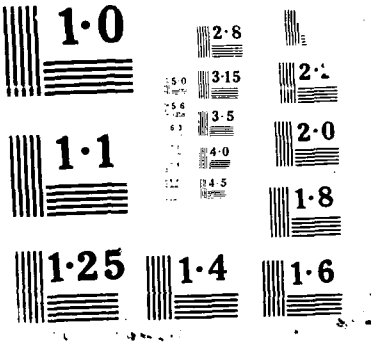
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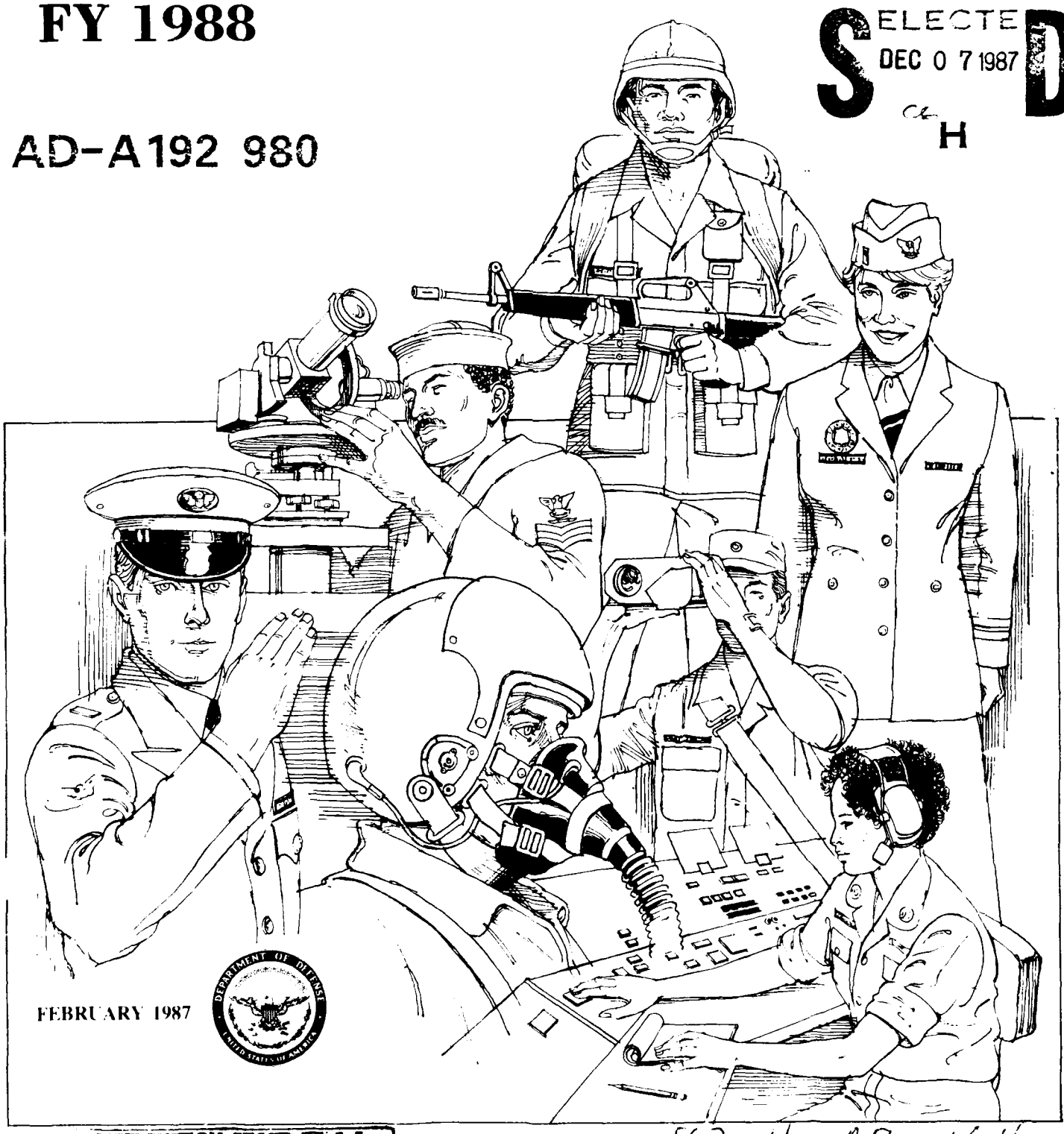
DEPARTMENT OF DEFENSE

MILITARY MANPOWER TRAINING REPORT FY 1988



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The Military Manpower Training Report of the Secretary of Defense is submitted to the Congress annually. It specifically supports the Department of Defense request for authorization of average military student training loads for each component, active and reserve, of each Service. It recommends the average student load for each category of individual training and education and includes justification for, and explanation of, the average student loads recommended.

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DEPARTMENT OF DEFENSE

MILITARY MANPOWER TRAINING REPORT

FOR FY 1988

Prepared by

Office of the Assistant Secretary of Defense
(Force Management and Personnel)

Department of the Army

Department of the Navy

Department of the Air Force

FEBRUARY 1987

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TABLES

EXECUTIVE SUMMARY

The Military Manpower Training Report of the Secretary of Defense is submitted to the Congress in accordance with 10 U.S.C. 138(d)(2). The Secretary of Defense is required to submit to Congress a written report each fiscal year, recommending the average student load for each category of training for each component of the armed forces which includes justification for, and explanation of, the average student loads recommended. The FY 1988 Military Manpower Training Report specifically supports the Department of Defense request for authorization of average military student training loads for each component, active and reserve, of each Service for Fiscal Year 1988 and FY 1989. Requested training loads are shown in Table 1.

TABLE 1.--Requested Training Loads, FY 1988 and FY 1989

	FY 1988	FY 1989
Active Components		
Army	82,503	81,630
Navy	68,993	70,044
Marine Corps	20,341	19,873
Air Force	38,574	39,972
Subtotal	210,411	211,519
Reserve Components		
Army National Guard	18,501	19,707
Army Reserve	15,075	15,950
Naval Reserve	2,841	2,841
Marine Corps Reserve	3,970	3,977
Air National Guard	2,508	2,366
Air Force Reserve	1,968	1,965
Subtotal	44,863	46,806
TOTALS	255,274	258,325

The requested loads are consistent with the President's Budget for FY 1988/1989 and the Department of Defense request for authorization of military manpower strengths, active and reserve, as submitted in February 1987.

Definitions and Explanation of Training Loads

This report discusses the training and education of individuals within the Department of Defense, other than the training within operational mission units. Individual training and education, for purposes of this report, is divided into six categories:

- Recruit Training, given to enlisted entrants to the Services who have not had previous military service.

- One-Station Unit Training, an Army program which combines Recruit Training and training in certain skills into a single course.

- Officer Acquisition Training, which leads to a commission in one of the Services.

- Specialized Skill Training, needed to prepare military personnel for specific jobs in the Military Services.

- Flight Training, primarily for prospective pilots and navigators preparing them for an initial operational assignment.

- Professional Development Education, relating to the advanced professional duties of military personnel or to advanced academic disciplines to meet Service requirements.

"Training loads" are the average number of students and trainees participating in formal individual training and education courses during the fiscal year. For a full fiscal year, training loads are the equivalent of student/trainee manyears of the participants, including both those in temporary duty and permanent change of station status.

The requirement for training in a baseline force is derived from the need to replace losses in each skill required in the military force structure. Losses, through separations, promotions and other causes, are projected at various points in the future and compared to the projected inventory of trained personnel. The deficit between the requirement in each skill and the inventory becomes a demand for an output of trained personnel. A phased input of students to the training establishment is then scheduled so that trained personnel, in each skill and skill level, are available at the proper time to replace the losses in those skills. The resulting workload placed on the training establishment is the basis of the training loads addressed in this report.

The training load for each component is the measure of the amount of training required for members of that component, although some of the training will be done by other Services, in DoD schools, or in some cases by institutions outside the Department of Defense. The training of members of the Reserve Components included in the report is the formal school training provided by the active training establishment to individual members of the Reserve Components while they are on active duty for training; this is primarily training provided to non-prior service personnel entering the Reserve Components.

An Overview of Training Loads

During FY 1988 and FY 1989, total requested DoD training loads will range between approximately 255,274 and 258,325. About 82 percent of these annual loads is composed of training for members of the active forces; the remaining 18 percent of these loads is training for members of the Reserve Components, while on active duty, conducted by the active training establishment.

Table 2 displays the percentage of total active force loads and the percentage of total Reserve Component loads attributable to each of the major categories of training in FY 1988.

TABLE 2.--Percent Distribution of Training Loads, FY 1988

Training Category	Active Forces	Reserve Components
Recruit Training	20%	25%
One-Station Unit Training	5%	13%
Officer Acquisition Training	9%	2%
Specialized Skill Training	59%	58%
Flight Training	3%	2%
Professional Development Education	5%	1%
Total	100%	100%

The preponderant categories of training, in terms of training loads, are Recruit Training and Specialized Skill Training, both of which, along with One-Station Unit Training, are strongly influenced by the number of enlisted non-prior service accessions to the force. Specialized Skill Training includes Reserve Counterpart training in programs where reservists actively train with their active duty counterparts. Selected reservists also train with their active duty counterparts as Individual Mobilization Augmentees (IMA's). Active/Reserve integration is essential in providing a highly trained Reserve manpower pool from which to draw in the event of mobilization. Other types of training -- all of Officer Acquisition Training, for example -- are also driven by the number of new accessions to the force. Table 3 divides the requested training loads for FY 1988 into two parts: training that is primarily accession-related, and is conducted

for the purpose of turning a civilian into a qualified servicemember with a usable military skill; and other training, which, for the most part, is conducted for the purpose of preparing members in later stages of their military careers for more demanding duties.

TABLE 3.--Accession-Related Training and Training Loads, FY 1988
(Thousands)

	Active Forces	Reserve Components	Total Active & Reserve
Accession-Related Loads			
Recruit	41.2	11.1	52.3
One-Station Unit Training	9.5	5.9	15.4
Officer Acquisition	19.2	0.7	20.0
Initial Skill (Officer & Enlisted) a/	71.6	19.8	91.3
Undergraduate Flight	5.6	0.6	6.1
Subtotal	147.1	38.1	185.2
Other Loads			
Other Specialized Skill	51.9	6.2	58.1
Other Flight	1.1	0.1	1.2
Professional Development	10.4	0.4	10.8
Subtotal	63.4	6.7	70.1
Total Load	210.4	44.9	255.3
Accession-Related Loads as Percent of Total Loads	70%	85%	73%

Note: Numbers may not add due to rounding.

a/ In some cases, includes some training for prior-service personnel or personnel who receive the training at a later stage in their career.

As Table 3 shows, training primarily related to new accessions amounts to about 70 percent of all training programmed for the active forces in FY 1988; only about 30 percent is for subsequent training. The comparable proportions for the Reserve Components are about 85 and 15 percent. The concentration on accession-related training demonstrates the priority the Services place on training intended to produce new servicemembers who are motivated to serve their country, amenable to discipline, and capable of productive service as members of military organizations.

Table 4 shows the trend in training loads.

TABLE 4.--Active and Reserve Training Load Trends by Service, FY 1980 - 1988
(Thousands)

	FY 80	FY 84	FY 85	FY 86	FY 87	FY 88	Percent Change FY 80-88	Percent Change FY 86-88
Active Forces								
Army	78	70	71	73	80	83	+ 5%	+13%
Navy	58	64	67	68	68	69	+19%	+ 2%
Marine Corps	19	21	19	19	20	20	+ 4%	+ 5%
Air Force	42	41	41	42	42	39	- 8%	- 9%
Total Active	198	196	198	203	210	210	+ 6%	+ 4%
Reserve Components	28	32	36	37	46	45	+59%	+23%
Total DoD	226	228	234	239	255	255	+13%	+ 7%

Note: Calculations are affected by rounding.

Table 5 compares training loads by the major categories of training.

TABLE 5.--Active and Reserve Training Load Trends by Training Category, FY 1980 - 1988
(Thousands)

	FY 80	FY 84	FY 85	FY 86	FY 87	FY 88	Percent Change FY 80-88	Percent Change FY 86-88
Recruit	51	52	52	52	53	52	+ 3%	+ 1%
Officer Acquisition	17	19	20	21	20	20	+17%	- 3%
Specialized Skill	115	119	124	132	148	149	+29%	+13%
Flight	5	7	7	7	7	7	+22%	+ 5%
Professional Development	8	10	12	11	11	11	+34%	+ 2%
One-Station Unit Training	29	21	19	17	16	15	-46%	- 7%
Total	226	228	234	239	255	255	+13%	+ 7%

Note: Calculations are affected by rounding.

The training loads reflect shifts in resources and training capacities to complement force plans. Total training loads will increase from 239,000 in FY 1986 to 255,000 in FY 1988. The growth in Specialized Skill Training accounts for much of the increase.

Funding for Individual Training

Funds required to support the training in the training load request for FY 1988 total approximately $18.5 billion. This amount includes pay and allowances for the students undergoing training, pay and allowances of military and civilian personnel in support of training, operations and maintenance costs, and training-related procurement and construction funded in FY 1988. Table 6 displays total training costs for each Service.

TABLE 6.--Funding of Individual Training by Service, FY 1988
($ Millions)

Army	Navy	Marine Corps	Air Force	DoD
$7,959.5	$5,178.6	$1,272.3	$4,054.0	$18,464.6

The same funding is shown in Table 7 for each of the major categories of training and for related support and travel.

TABLE 7.--Funding of Individual Training by Training Category, FY 1988
($ Millions)

Recruit Training	$1,287.6
Officer Acquisition Training	500.4
Specialized Skill Training	4,786.7
Flight Training	2,324.9
Professional Development Education	670.8
Army One-Station Unit Training	423.4
Medical Training	704.3
BOS and Direct Training Support	4,699.8
Management Headquarters	151.7
PCS Cost for Training	644.6
TDY Cost for Training	1,321.4
Reserve Component Pay and Allowances	949.0
Total	$18,464.6

Note: Numbers may not add due to rounding.

Funding estimates are based on data contained in DoD's Five Year Defense Program (FYDP). This report is consistent with resource estimates in the President's budget, the justification material submitted to the Congress, the Five Year Defense Program and other internal DoD management reports.

Manpower for Individual Training

Individual training requires manpower to conduct and support instruction, manage military schools and training centers, maintain training bases and provide support to students, military staff members and their dependents. Chapter VIII of this report provides an analysis of military and civilian manpower in individual training. Manpower in support of individual training for FY 1988, by the general functions it performs, is shown in the following table.

TABLE 8.--DoD Manpower in Support of Individual Training, FY 1988
(End Strength, Thousands)

	Military	Civilian	Total
Training and Direct Training Support a/	97.6	21.7	119.3
Base Operating Support	28.8	40.5	69.3
Major Training Headquarters	1.7	1.5	3.2
Total	128.1	63.8	191.9

a/ Includes instructors, instructional support, school/training center administration, student supervision.

Table 9 shows that the total amount of manpower in support of individual training decreased significantly between FY 1983 and FY 1988. Since FY 1980 all functions of support for training have shown a decrease in military and civilian manpower.

TABLE 9.--Trends, Manpower in Support of Training, FY 1980-1988
(Combined Military and Civilian End Strengths, Thousands)

				Percent Change	
	FY 80	FY 83	FY 88	FY 80-88	FY 83-88
Training and Direct Training Support	122	123	119	-2.2%	-2.8%
Base Operating Support	73	74	69	-5.1%	-6.7%
Major Training Headquarters	4	4	3	-10.4%	-13.1%
Total	199	201	192	-17.7%	-22.6%

Training workloads -- that is, all students trained including DoD military students, foreign students and students from other U.S. agencies -- have increased as Table 10 shows.

TABLE 10.--Training Workloads, FY 1980-1988
(Thousands)

FY 80	FY 83	FY 88	Percent Change FY 80-88	Percent Change FY 83-88
239	243	261	+ 9.3%	+ 7.5%

The decrease in training manpower compared to the increase in training workload shows a productivity improvement in the Service training establishments. This is consistent with DoD's general emphasis on increased efficiency in support areas.

The Necessity for Good Training

The primary objective of individual training is to provide the operational forces with personnel adequately trained to assume jobs in both Active and Reserve military units. Without effective training and education programs, the operational forces would be manned with personnel who are less than fully qualified for their jobs. Since the nation cannot predict when or where war may break out or count on an extended period for mobilization and training, we must have effective individual training conducted in training institutions to assure that our operational units are capable of carrying out national security missions in peace or war when called upon.

MILITARY MANPOWER TRAINING REPORT FOR FY 1988

I

INTRODUCTION

Training Requirements and Manpower Requirements

Requirements for training and education of military personnel are derived ultimately from national security objectives. This Report, the Report of the Secretary of Defense to the Congress on the FY 1988 Budget, and the Defense Manpower Requirements Report, describe the progression from national security objectives to training loads requirements. The Report of the Secretary of Defense explains the relationship between the threat and the forces designed to cope with the threat. The Manpower Requirements Report relates these forces to the requirement for trained manpower to man the forces. The Military Manpower Training Report takes as a starting point the requirement for trained military manpower described in the Manpower Requirements Report. It then describes how these requirements relate to the demand placed on the military training establishment to supply this trained manpower, and how this demand leads to the DoD request for military student training load authorizations for each component of the Military Services. The Manpower Requirements Report and this Report are mutually supportive; however, the data in the two reports are not interchangeable or directly comparable. The principal reason for this difference is that the main focus of the Manpower Requirements Report is upon requested strength on the last day of fiscal years (that is, end strength), whereas the main focus of this Military Manpower Training Report is upon requested student loads, a concept more comparable to average strength, or man-years, than to end strength.

Definition of "Individual Training and Education"

This report addresses the "individual training and education" activities of the Department of Defense. These involve the training of individual military members in formal courses conducted by organizations whose predominant mission is training; this training is to be differentiated from training activities conducted by operational units incidental to their primary combat, combat support, or combat service support missions. Training conducted in the unit environment, the training of organized crews and operational units for the performance of specific missions, is not included in the training loads discussed in this report, but is discussed in the Manpower Requirements Report. In certain categories of training, on-the-job training (OJT) in units supplements or substitutes to some extent for all or part of formal course training requirements; OJT is also not included in the training loads discussed in this report.

The purpose of individual training and education is to give individual servicemembers the skills and knowledge that will qualify them to perform effectively in subsequent assignments as members of

operational military organizations. "Individual training and education" includes all formal military and technical training and professional education conducted under centralized control, generally under the supervision of a Service training command or similar organization. The trainees and students undergoing the training or education addressed in the report include the following categories of personnel:

1. Active Force: officers, enlisted personnel, and Service Academy cadets and midshipmen.

2. Reserve Components: officers and enlisted members on active duty for initial or refresher training in formal school courses.

Training of some civilian students, prior to their entry into the Services, in such programs as ROTC, is also discussed in the report. However, training loads are properly requested only for training and education of personnel received while they are in active military status.

In general, the training discussed in this report is conducted under Major Defense Program VIII, "Training, Medical and Other General Personnel Activities," as presented in the Defense budget. Exceptions to these general rules are pointed out, where appropriate, in the body of the report.

Personnel undergoing individual training and education are classified, for manpower accounting purposes, as either trainees, students, or cadets, unless they are undergoing training while on temporary duty or temporary additional duty from their unit of assignment, or unless they are being trained while en route to new stations as transients. The term "trainees" is generally used for all enlisted personnel in Recruit Training and Initial Skill Training. "Cadets" (or "midshipmen" in the case of the Naval Academy) are members being educated at one of the Service Academies. All others receiving individual training and education are identified as "students". The distinction is not important for the purposes of this report, and the term "student" will be used where appropriate to describe members of all three classifications as well as temporary duty and transient personnel being trained.

The term "training" generally refers to instruction in military subjects either at a basic level, as in Recruit Training, or in a military or job-related technical specialty, such as pilot training or training in radar repair. "Education" generally refers to study either in more advanced subjects or in military subjects which apply to an entire Service or to the broad mission of national security, as, for example, the curriculum at the National War College. The term "training" will be used in this report to refer to individual training and education as a whole.

Reserve Component Description

The Ready Reserve is the major source of manpower augmentation for the active force. It has two principal elements: the Selected Reserve and the Individual Ready Reserve/Inactive National Guard. The Selected Reserve includes three groups: (1) units organized, equipped, and trained to perform wartime missions; (2) Individual Mobilization Augmentees (IMA's) who are highly trained, skilled people designated to provide wartime augmentation to active component units on or shortly after mobilization; and (3) the training pipeline, which is composed of members of the Selected Reserve who have not completed sufficient training to be awarded a military skill designation. Training pipeline people may not deploy overseas upon mobilization until minimum training is completed (12 weeks or its equivalent). Selected Reservists assigned to units and IMA's train throughout the year and participate annually in active duty training. As many as 200,000 Selected Reservists may be involuntarily recalled by the President for up to 90 days, with an option for a 90 day extension, to augment active forces.

The Individual Ready Reserve (IRR) and Inactive National Guard (ING) consists of those Ready Reservists who are not in the Selected Reserve. Members of the IRR and ING have served recently in the active force or the Selected Reserve and have some period of their military service obligation remaining or have volunteered to remain beyond their statutory obligation. The majority of the IRR and ING members do not participate regularly in organized training. All members of the IRR and ING are subject to being ordered to active duty during a national emergency declared by the President or the Congress.

The Standby Reserve consists of personnel who maintain their military affiliation, but are unable to remain in a Ready Reserve status, or who are determined to be critical mobilization assets. The Retired Reserve consists of former members of the active and reserve forces who have retired. Members of the Standby and Retired Reserve do not generally participate in reserve training or readiness programs. They may be ordered to active duty by the Secretary of the military department concerned in the interest of national defense. However, standby and retired reservists who have not completed 20 years of active service may not be activated until it has been determined that there are not enough qualified members in the Ready Reserve. Retired reservists who have completed 20 or more years of active service may be ordered to active duty at any time.

FY 1988 Training Report and the FY 1988 Budget

It is important to emphasize that this report, while consistent with the Department of Defense Budget for FY 1988, differs in structure from the budget justification in two major respects. Budget justifications are focused on explaining how, by whom, and why money is to be spent; budgets for training and their justifications, therefore, are prepared by the Service which conducts the training programs and must obtain funds to train personnel from other Services in addition to its own. By contrast, this report details and emphasizes the training loads of the components of the parent Service whose members are undergoing the training, and deals in less detail with resources and funds required by the Service which conducts the training. For example, Navy personnel being trained by the Air Force are treated in this report as part of the Navy military student training load, since they are being trained to fill Navy requirements. However, in budget documents, funds to conduct training for these students, who are a part of the Air Force training workload, are included in Air Force appropriation requests.

Definitions of Major Training Categories

The portion of this report which discusses training loads in detail is organized into five chapters (Chapters III through VII), each of which addresses one of the major categories of training. These major categories are briefly defined below. Each chapter will more fully describe the training category and its sub-categories, the requested training loads, and the training methodology.

Recruit Training includes the basic introductory physical conditioning, military, and indoctrination training given to all new enlisted entrants in each of the Services. One-Station Unit Training (OSUT) is an Army training program which meets the training objectives of both Recruit and Specialized Skill Training in certain skills through a single course for new Active and Reserve enlisted entrants which is conducted by a single training unit. Since it includes elements of two categories of training, it is treated separately in this report.

Officer Acquisition Training, sometimes called pre-commissioning training, includes all types of education and training leading to a commission in one of the Services, such as the programs of the Service Academies and officer candidate/training schools. Students not in active military status, such as Reserve Officer Training Corps students, are excluded from requested loads in this report.

Specialized Skill Training provides officers and enlisted personnel with new or higher levels of skill in military specialties or functional areas to match specific job requirements.

This category includes Army Advanced Individual Training and Navy Apprenticeship Training. Certain flight-related training, such as

training of air traffic controllers and aircraft mechanics, and survival training in the Air Force, is reported under Specialized Skill Training. None of the officer acquisition programs are included in Specialized Skill Training.

Flight Training provides the individual flying skills needed by pilots, navigators, and naval flight officers to permit them to function effectively upon their assignment to operational mission units. The Service undergraduate flight training programs culminate in an officer, or an Army warrant officer, receiving "wings" and being categorized as a "designated" or "rated" officer.

The undergraduate programs do not include the major formal advanced flight training programs. Training conducted by Service advanced flight training organizations is not considered individual training and is therefore beyond the scope of this report.

Professional Development Education includes educational courses conducted at the higher-level Service schools or at civilian institutions to broaden the outlook and knowledge of senior military personnel or to impart knowledge in advanced academic disciplines to meet Service requirements. Training of this type is required to prepare individuals for progressively more demanding assignments, particularly for higher command and staff positions. Programs include undergraduate and graduate education and other courses not leading to a degree.

Enlisted leadership training for senior non-commissioned officers is included in Professional Development Education rather than in Specialized Skill Training to recognize its broad professional content. However, Navy leadership training, which is given to all grades of petty officers, is included in Specialized Skill Training, as is the rest of noncommissioned officer training for more junior personnel conducted by the other Services.

Determining Training Requirements and Training Load

The amount and type of training to be conducted in the Department of Defense is the product of a series of calculations that is described in Appendix A to this report.

In brief, the process begins with the determination of the requirement for military personnel with specific skills to fill positions in the approved or projected force. The requirement for trained manpower must then be measured against the available inventory of trained personnel projected at various points in the future. This comparison, made for each military skill and skill level, establishes the need for the training of personnel, on a phased basis, to fill current and projected skill shortages. The requirement for the training of personnel on a schedule calculated to maintain the skill inventory becomes the workload of the Service training establishments. It is measured in terms

of the average military training student load, or "training load". The training load for a given period is not only a measure of the amount of training to be accomplished; but, adjusted to take account of the Service conducting the training, it becomes a "workload" and thus it is also a basis for establishing the requirement for resources (manpower, funds, material, and facilities) needed to support the training to be conducted by a Service.

Conceptually, the training load for a given period is the average student strength for the period, and approximates manyears. The total training load is the sum of the loads for all the included individual courses. Training loads for individual courses are determined by the following factors:

1. The length of the training course.

2. The desired number of graduates, or output, of the course.

3. The number of entrants, or inputs, into the course required to obtain the desired output. This, in turn, depends on the pattern of attrition, or failures of entrants to graduate, for the course.

If attrition occurs at a constant rate during a course, the training load is computed by the following formula:

$$\frac{\text{Entrants} + \text{Graduates}}{2} \times \text{Course Length (expressed as a fraction of a year)} = \text{Load}$$

This is the basic method for computing the training loads discussed in this report. However, if attrition does not occur at a uniform rate, as is frequently the case, and the rate and phasing can be specified, more complex formulas and computer simulations are used to estimate training loads.

Accuracy in Projecting Training Loads

In accordance with law, training load authorizations must be requested well in advance of the period when the training is actually conducted. This year, for example, in addition to the more refined estimates of loads needed for FY 1988, load authorizations must be requested for the fiscal year which begins more than a year after the request is submitted -- that is, loads for FY 1989, beginning October 1, 1988, must be requested in the spring of 1987. This statutory requirement implies the capability to predict future training loads with precision. In actuality, while loads for some long-leadtime programs, such as the Service Academies, can be predicted with considerable accuracy, there are many uncertainties in projecting training loads. Some of the causes of uncertainty are:

1. Unpredictability of individual decisions to enlist, re-enlist, or retire; this factor may lead to unanticipated changes in the skill inventory, requiring changes in the composition or size of training loads, or to shifts of portions of the training load from one fiscal period to the following period.

2. Unanticipated changes in force structure, requiring a readjustment of the skill inventory and the mix of courses in the training load.

3. Changes in attrition rates and patterns, causing unprogrammed fluctuations in training rates and loads.

By forecasting training needs as far as possible into the future and continuously reviewing and adjusting training inputs and loads, the Services are able to adapt the training system to changing conditions. However, it should be clear that extended projections are subject to error; adjustments are inevitable and, in fact, necessary for good management.

Training Load Request by Component and Category

The tables on the following two pages display in category detail the requested training loads for FY 1988 and FY 1989. The loads for each period are displayed by component and by each of the major categories of training.

TABLE I-1.--Military Training Student Loads, Fiscal Year 1988, By Component and Major Training Category

	Recruit Training	One-Station Unit Training	Officer Acquisition Training	Specialized Skill Training	Flight Training	Professional Development Education	Total
Active Forces							
Army	12,192	9,520	7,164	49,046	1,241	3,340	82,503
Navy	14,659	-	6,408	43,346	2,210	2,370	68,993
Marine Corps	7,484	-	314	11,159	509	875	20,341
Air Force	6,857	-	5,340	19,900	2,654	3,823	38,574
Subtotal	41,192	9,520	19,226	123,451	6,614	10,408	210,411
Reserve Components							
Army Reserve	3,470	1,161	284	9,863	186	111	15,075
Army National Guard	3,774	4,766	200	9,421	272	68	18,501
Naval Reserve	1,105	-	0	1,673	0	63	2,841
Marine Corps Reserve	1,825	-	227	1,884	0	34	3,970
Air Force Reserve	405	-	21	1,430	65	47	1,968
Air National Guard	570	-	0	1,695	196	47	2,508
Subtotal	11,149	5,927	732	25,966	719	370	44,863
Total	52,341	15,447	19,958	149,417	7,333	10,778	255,274

TABLE I-2.--Military Training Student Loads, Fiscal Year 1989, By Component and Major Training Category

	Recruit Training	One-Station Unit Training	Officer Acquisition Training	Specialized Skill Training	Flight Training	Professional Development Education	Total
Active Forces							
Army	11,888	9,831	7,104	48,264	1,199	3,344	81,630
Navy	15,295	-	6,390	43,706	2,246	2,407	70,044
Marine Corps	6,558	-	319	11,587	529	880	19,873
Air Force	7,085	-	5,368	21,115	2,597	3,807	39,972
Subtotal	40,826	9,831	19,181	124,672	6,571	10,438	211,519
Reserve Components							
Army Reserve	3,859	1,232	253	10,310	185	111	15,950
Army National Guard	4,711	4,783	192	9,691	261	69	19,707
Naval Reserve	1,105	-	0	1,673	0	63	2,841
Marine Corps Reserve	1,797	-	227	1,919	0	34	3,977
Air Force Reserve	405	-	21	1,420	72	47	1,965
Air National Guard	570	-	0	1,559	190	47	2,366
Subtotal	12,447	6,015	693	26,572	708	371	46,806
Total	53,273	15,846	19,874	151,244	7,279	10,809	258,325

II

TRAINING PATTERNS

General Description

The development of servicemembers of all components through formal training, education, and practical experience generally follows a common pattern. The new servicemembers (or, in the case of some Officer Acquisition Training, the prospective servicemembers) first receive training designed to develop the basic attributes of all members of their Service. In most cases, the graduate of the initial training is then taught the skills required for a military job at the lowest skill level. Those servicemembers who do not remain beyond their initial enlistments or obligated terms of service do not, in most cases, receive additional formal training. Those who remain, the career members, will further develop their military knowledge and technical skills through experience in military jobs, interspersed, as required, with training or education needed to prepare them for more responsible positions. During any part of their terms of service, military personnel are also encouraged, as their military assignments may permit, to improve their educational attainments to the benefit of themselves and their Services through off-duty and voluntary education programs that may be available. This combination of job experience, training, and education is essential to the development of a military force that is capable of carrying out the national security mission.

Enlisted personnel usually work in relatively specialized skill fields, whereas the duties of officers, particularly of those in the career force, call for broader expertise. For these reasons, the training and education patterns of officers and enlisted personnel differ, and will be discussed separately in the following sections of this chapter.

In addition to training members of the active forces, the Service training establishments also train members of the Reserve Components. Reserve Component training, as part of individual training and education, involves Reservists and Guardsmen who are on active duty for formal school training. It does not include training of Reserve Component members provided under the following circumstances:

- Training received while members are on extended active duty (this training is included in active force aggregates);
- Training conducted by the Reserve Components themselves;
- Training received on annual active duty, except if provided through courses conducted by the active training establishment;

- Any training received while the individual is not in an active military status; as a minor exception, some Reserve and Guard technicians attend military schools in Civil Service status.

Training of members of the Reserve Components will comprise 18 percent of all individual training and education in FY 1988, a 3 percent increase over FY 1986. The change reflects DoD's overall manpower policy of increasing the peacetime reserve strengths relative to the active force strength.

Officer Training Patterns

Each Service has developed career patterns to prepare its officers to assume progressively higher command and staff responsibilities. These career patterns are composed of operational assignments, during which the officers learn their professions through experience, and periodic individual training and education, which provide them with knowledge and skills needed for progressively more demanding subsequent assignments.

Officer training and education can be divided generally into three types. First, each Service maintains a system of professional military education that is progressive in nature. This education is related more to the increasing responsibilities associated with career progression to more senior grades than to the individual's current assignment or specialty. It is primarily the study of officership and the command and staff knowledge required of all professional military officers. The second type of education and training includes the many specific skill-producing courses that are conducted to enable the officer to perform immediately upon assignment to a specialized or functional area. These courses vary in length from a few days to several months. They present, for the most part, strictly job-oriented training, and are often in the nature of orientation or refresher courses. Third, the Services also provide selected officers with advanced academic education, either in-house or at civilian institutions, to meet specific requirements for officers educated in technical, scientific, engineering, and managerial fields. Officers also participate in a variety of other educational programs, many on a part-time basis, usually with the student sharing in the cost.

Training and education for career officers, involving one or more of the types of training and education described above, follow the general patterns outlined in the following paragraphs. The patterns vary among the Services to some extent, and not all officers will participate in all of the schooling described. The number of officers participating in schooling becomes progressively smaller, and participation more selective and demanding, as officers move through their careers.

Non-career officers (those who may be expected to serve only an initial tour of active duty) generally receive training only at the entry level. In some cases, they may receive skill-oriented courses such as pilot training, which is lengthy and results in a commensurately longer active duty obligation, or training in other specialties such as maintenance or communications.

Entry Level Training. Upon entry, the young officers' initial training is Service-oriented and intended to prepare them for duties at the lowest operational level -- company, squadron, or ship. The newly commissioned Army officers will attend a basic course conducted by the particular branch of the Army to which they are assigned, such as infantry, armor or artillery. Navy ensigns are usually assigned to school training based on their warfare specialty. All newly commissioned Marine officers attend The Basic School. A newly commissioned officer in the Air Force may go to Flight Training or training in a technical specialty.

Career Training. After some operational experience, the career officer requires further professional military education to prepare for service at the next level -- for example, as a unit commander or a headquarters staff officer. In the Army, this entails a return to branch school for more advanced training. An Air Force officer could be selected for the Squadron Officer School. A Marine Corps officer would normally attend the Amphibious Warfare School. Navy officers at this stage in their careers may attend a school in a specialty appropriate to their future assignments.

To satisfy Service requirements and as a further step in professional development, some officers are selected for participation in an advanced academic educational program at a civilian institution or one of the two Service technical institutes, the Naval Postgraduate School and the Air Force Institute of Technology.

Intermediate Service Schools. As officers progress (between six and 16 years of service, depending on Service criteria) they are ready for the next, or command and staff, level of professional military education in preparation for assuming higher responsibilities. Attendance is competitive, as not all officers are selected to attend. Each Service has such a course; the Armed Forces Staff College, a joint school, is also conducted at this level. Each Service has its own emphasis with regard to this schooling because of its pattern of missions; those differences are reflected in the school curricula.

Senior Service Colleges. Subsequent to the intermediate years, little technical training is provided. The final level of professional military education is that of the Senior Service Schools -- the war colleges -- for which attendance is highly selective. The Army, Navy, and Air Force each has a war college. In addition, there is the National Defense University, consisting of the National War College, the Industrial College of the Armed Forces, and the Capstone course for

general officers. Officers graduating from the Senior Service Schools have the academic foundation required for command and staff positions at the highest level. The different curricula of these schools reflect the differing patterns of missions among the Services. In some instances Reserve officers are able to attend Senior Service Schools in residence. The schools, generally, also offer a non-resident course which consists of correspondence studies and resident phases.

Enlisted Training Patterns

Individuals entering upon an initial enlistment are provided Recruit Training that introduces them to military life. Following this indoctrination training, they will follow one of three possible avenues dictated by their respective component's requirements:

1. Initial Skill Training, which prepares the enlistee for an initial duty assignment, or

2. Direct duty assignment on the basis of a skill already acquired in civilian life, or

3. Direct assignment to first duty unit for on-the-job training (OJT).

The Army One-Station Unit Training (OSUT) program is a variation of the first of these three avenues, since it combines Recruit and Initial Skill Training into a single course, followed by assignment to an operational unit. About 26 percent of Active Army entrants to initial skill enlisted training will be trained under the OSUT in FY 1988. For the Reserve Components, about 32 percent of the Army entrants to initial skill enlisted training will receive OSUT.

The expected distribution of Active Recruit Training graduates in FY 1988 is shown in Table II-1.

TABLE II-1.--Disposition of Active Recruit Training Graduates in FY 1988

	Army	Navy a/	Marine Corps	Air Force
To Initial Skill Training	98%	93%	94%	97%
To Duty Assignment (Civilian-Acquired Skill)	2%	*	*	*
To Duty Assignment (On-the-Job Training)	0%	7%	6%	3%
	100%	100%	100%	100%

*Less than 1 percent.

a/ 26% of Navy Recruit Training graduates attend short "Apprenticeship Training" courses (carried under Initial Skill Training in this report) as a preliminary to further training on the job.

As the table indicates, most enlisted personnel receive formal Initial Skill Training to provide them with a basic military skill. The combination of Recruit Training and Initial Skill Training (or Army One-Station Unit Training) is the foundation of the development of enlisted personnel, because it turns civilians into servicemembers who are qualified to fill positions in Active or Reserve units.

Due to the decrease in Air Force accessions in recent years -- down from 70,100 in FY 1984 to 68,545 in FY 1988 -- and the increase in complexity of Air Force systems and jobs which require formal training, the percent of active duty recruit graduates going to technical school has increased from 95 percent in FY 1984 to 97 percent in FY 1988. This trend is expected to continue.

Other than for on-the-job training in the work environment, enlisted personnel normally receive no further formal skill training beyond the training previously described during their initial enlistments. The major exception is Navy training, conducted by fleet training centers, in such shipboard duties as firefighting.

Subsequent to reenlistment, individuals may be selected for attendance at a journeyman level course in their specific occupational areas. This training emphasizes the appropriate military applications for the skills being taught. In most cases, however, enlisted personnel advance in their skill areas through experience gained on the job and without extensive additional formal training. Some enlisted personnel are given the opportunity to attend NCO professional development training programs which prepare them for increased supervisory and leadership responsibilities.

Active Navy training facilities are being opened on weekends to make classroom and training facilities accessible to the Selected Reserve. This Readiness Center Concept has been approved for implementation nationwide. This initiative will concentrate resources (technical training equipment, training devices, and instructors) to improve the overall quality of Reserve training. Skill progression courses are broken down into modules that can be accomplished during drill periods. Exportable training and course modules will remove many barriers to improving readiness in the Naval Reserve. Now all formal schools or training required for mobilization are available to the reservist.

Normally, few enlisted personnel attend regularly programmed specialized courses after mid-career. There are instances, of course, where new equipment or systems are introduced into a Service, and senior level enlisted personnel are formally trained in operation and maintenance techniques. Selected Active and Reserve senior enlisted personnel attend schools, such as the Army's Sergeants Major Academy and Air Force Senior NCO Academy, which are, on the NCO level, similar in purpose to the Intermediate and Senior Service Schools in the officer education system.

III

RECRUIT TRAINING AND ARMY ONE-STATION UNIT TRAINING

General Description

Recruit Training is the basic indoctrination training given to enlisted personnel of each Service upon their initial entry into military service. Recruit Training provides an orderly transition from civilian to military life, motivation to become a dedicated and productive member of the Service, and instruction in the basic skills that are required by all members of the Military Service involved. Training in each of the Services emphasizes discipline, observance of military rules, social conduct, physical conditioning, and the building of self-confidence and pride in being a member of the service. Beyond these common objectives, Recruit Training in each Service is designed to meet the particular training requirements of that Service which are a reflection of the Service mission. Graduates of Recruit Training have the basic knowledge and skills required to qualify them, after formal or on-the-job training in a particular skill, for service in an operational unit of the parent Service.

Army One-Station Unit Training (OSUT) is unique in that it combines Recruit Training and Initial Skill Training in certain skills into a single course conducted by a single training unit at a single training installation. OSUT therefore includes elements of two major training categories; consequently, it is treated separately at the end of this chapter. OSUT training loads are not included within the Recruit Training loads displayed in this chapter.

Recruit Training Loads

The training loads for FY 1980 through FY 1989 for each component of each Military Service are shown in Table III-1 on the following page.

TABLE III-1.--RECRUIT TRAINING LOADS, FY 1980-1989 a/

Service Component	FY 80	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
Army b/									
Active	10,453	10,533	12,726	12,366	10,853	11,288	12,716	12,192	11,888
Reserve	2,339	4,378	3,687	3,688	3,621	3,442	3,771	3,470	3,859
Natl Guard	2,661	3,590	3,184	2,818	3,113	3,257	4,400	3,774	4,711
Navy									
Active	13,597	13,315	12,816	12,780	13,166	14,726	14,177	14,659	15,295
Reserve	290	312	305	1,385	1,626	1,227	1,064	1,105	1,105
Marine Corps									
Active	10,166	9,434	8,555	9,459	8,340	7,494	7,459	7,484	6,558
Reserve	1,623	2,031	1,977	2,045	2,041	1,930	1,849	1,825	1,797
Air Force									
Active	8,872	8,361	7,411	6,727	8,047	7,335	6,857	6,857	7,085
Reserve	297	397	376	343	363	412	405	405	405
Natl Guard	677	749	575	540	555	856	570	570	570
DoD									
Active	43,088	41,643	41,508	41,332	40,406	40,843	41,209	41,192	40,826
Res/Gd Tot	7,887	11,457	10,104	10,819	11,319	11,124	12,059	11,149	12,447
DoD Total	50,975	53,100	51,612	52,151	51,725	51,967	53,268	52,341	53,273

a/ In this table and in all subsequent tables in this report, training loads for the years prior to and including FY 1986 data are actual, FY 1987 and subsequent year data are estimated.

b/ Data do not include Army One-Station Unit Training loads.

Recruit Training

The following table displays data for Recruit Training for average training loads for each year from FY 1986 to 1988 and, for FY 1988, the number of entrants (input) and number of graduates (output). Data are shown separately for each of the components of each Service.

TABLE III-2.--Training Inputs, Outputs, and Loads, Recruit Training, FY 1986 - 1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
ARMY					
Active	11,288	12,716	81,060	71,344	12,192
Reserve	3,442	3,771	23,878	21,062	3,470
Natl Guard	3,257	4,400	25,089	22,089	3,774
Navy					
Active	14,720	14,177	90,798	80,034	14,659
Reserve	1,227	1,064	7,000	6,227	1,105
Marine Corps					
Active	7,494	7,469	34,351	30,185	7,484
Reserve	1,930	1,849	8,400	7,397	1,825
Air Force					
Active	7,335	6,857	60,000	55,200	6,857
Reserve	412	405	3,552	3,268	405
Natl Guard	856	570	4,993	4,591	570
DoD					
Active	40,843	41,209	274,209	244,763	41,192
Sv/Res Total	11,124	12,259	72,912	64,637	11,143
DoD Total	51,967	53,268	347,121	309,400	52,341

Each of the Services conducts training for women recruits that is similar in concept to Recruit Training for males. The training syllabi are essentially the same for males and females. In the Navy and Marine Corps, male and female Recruit Training is collocated but not integrated. The major difference between these male and female courses is that women recruits generally receive less training in combat oriented skills. The de-emphasis on combat skills in the Marine Corps causes the length of training for women to be somewhat shorter.

Rationale for Recruit Training

The underlying philosophy of Recruit Training in each of the Services is that the demands of military service are fundamentally different from those of civilian life. Military service requires a high level of discipline and physical fitness, a homogeneity of outlook, and an ability to live and work as part of a highly structured organization. There are few parallels in civilian society to the demands of military service. Each recruit, therefore, must be transformed into a member of the military team in order to function effectively in the military environment. The attitudes, habits, and basic skills formed in Recruit Training are the foundation of a cohesive military organization. Later training provides the skills and knowledge needed for specific jobs; Recruit Training shapes the civilian entrants into dedicated members of their Military Services with the potential for further development.

The major determinants of Recruit Training loads are the total number of people entering service who must receive Recruit Training (input), the length of the training course, and projected patterns of attrition. Course length and attrition are discussed later in this chapter. The following two sections discuss inputs: first, inputs of active duty personnel, and second, inputs of members of the Reserve Components on active duty for initial training.

Active Duty Input

The annual recruiting objective for active duty enlistees without prior military service is a function of the following factors:

1. Current enlisted trained strengths.
2. Number of enlisted personnel currently in training.
3. Projected enlisted losses through separations or other reasons (e.g., desertion, death, acceptance of a commission, retirement, etc.).
4. Projected prior-service enlistments -- that is, the return from civilian life of former service-members.
5. The projected requirement for trained enlisted personnel.

"Trained strength" is the number of personnel required to fill "structure" spaces (i.e., positions in military organizations that require specific grades and skills) and individual "pipeline" spaces, such as transients en route between assignments. The Defense Manpower Requirements Report contains a full discussion of how military manpower requirements are determined. The projected trained strength requirement is compared with the projected trained strength inventory to forecast future skill and strength imbalances. Future shortages that are not expected to be satisfied either by prior-service enlistees or service-members currently in skill training courses determine the training output needed to man the force with trained personnel. To determine the necessary input to achieve this output, allowance must be made for course attrition, the number of students entering a course of instruction who fail to complete it. The total input requirement must, therefore, be increased to compensate for expected attrition losses.

The optimal leveling of monthly inputs to obtain the most efficient use of training staff personnel and training facilities is a continuing goal. However, the phasing of inputs may at times be varied in order to take advantage of the best recruiting periods for maintaining quality and quantity.

Historically, June through September and January have been the most productive recruiting months, reflecting behavioral patterns that are related to the civilian academic calendar. Enlistments increase (1) shortly after high school graduation, (2) when peers return to school in the fall, and (3) after the results of the first term academic work are announced.

The Services must be able to accept most prospective enlistees at the time they are ready to enter service. Requiring enlistees to enter military service in phase with requirements and on an even-flow basis would result in the loss of many potential enlistees to other sources of employment. Accepting enlistees as they become available, however, requires a training structure capable of accommodating peak surges of enlistments.

Reserve Component Input

Persons enlisting in the National Guard and Reserve forces without active duty experience require the same Recruit Training as active duty enlistees, and for the same reasons. Recruit Training loads for the Reserve Components are based on the same factors as active force loads. Guard and Reserve trainees, while in Recruit Training, are mingled with active duty trainees in units so that their training is identical.

Reserve Component recruits form a significant part of the workload of the active Recruit Training establishment. Recruit Training for the Reserve and Guard will account for 21 percent of all DoD Recruit Training in FY 1988, about the same percent as it was in FY 1986. This

is an increase from 16 percent in FY 1980. Reserve Component training accounts for 38 percent of all Army One-Station Unit Training programmed in the Department of Defense for FY 1988.

The planning considerations for Reserve Component personnel are essentially similar to those for the active force; detailed phasing of this training is complicated, however, by the additional consideration of civilian employment or school commitments for these personnel. For this reason, a pool of personnel who have been enlisted but who have not yet been able to attend initial training is normal. Effort is made to insure that this backlog is kept within a reasonable size.

Course Length and Course Content

Enlisted training loads depend not only upon the numbers of entrants but also on the extent of skills required of entering enlisted personnel by each Service. Enlisted personnel attain those skills in Recruit Training and in Specialized Skill Training. Specialized Skill Training is discussed in a subsequent chapter. Recruit Training course lengths are determined in part by how much of the required training is to be provided during the Recruit Training phase and how much is to be deferred to later training. The four Services, because of differences in their missions, take somewhat different approaches in establishing the content and length of their Recruit Training courses.

A split training option is available to the Reserve Components. This program normally separates recruit training from specialized skill training. This option is limited to enlisted entrants who are time-constrained from attending all their required training in one block by either educational pursuits or seasonal employment. The service member attends unit drill after completing recruit training and normally returns to active duty within one year to complete skill training.

The Navy has established the Navy Sea/College Program (NSCP) to target high quality youths for active naval service to broaden the quality base and provide fleet experienced sailors to the Naval Reserve. The NSCP member is required to spend two years on active duty and then has a four year Selected Reserve obligation.

Recruit Training in each of the Services covers four areas: (1) some processing and testing; (2) introduction into Service life; (3) instruction in military courtesy, discipline, and hygiene; and (4) fundamental military-related training involving physical fitness, military drill, and self-defense. In addition, each Service provides training in military skills that should be possessed by all, or almost all, members of that Service. The degree to which these Service-wide required skills exist differs widely among the Services. This factor accounts for most of the differences in course content and, therefore, course length. The variance in quality of enlistees among the Services also has a bearing on course length; recruits with lower intelligence and lesser amenability to discipline require a longer training period to achieve training objectives.

The length of the standard Recruit Training course in each Service is shown in the following table:

TABLE III-3.--Recruit Training Course Lengths, FY 1988 (Weeks)

Army	Navy	Marine Corps	Air Force
8.0	7.7	11.0	6.0

Army and Marine Corps Recruit Training differ from the Air Force and Navy programs because all recruits are given intensive physical conditioning and instruction in basic ground combat skills, including the use of individual weapons. These Services subscribe to the view that all enlisted personnel must achieve a basic level of qualification in ground combat skills, and their Recruit Training curricula provide a common core of training in these skills.

In FY 1985 the Marine Corps increased female recruit training from 48 training days to 56 training days. Since women Marines serve in many different units and military occupational specialties, their exposure to danger in a hostile environment cannot be precluded. Consequently, female recruit training was increased in length to provide training in defensive techniques and operations.

The Air Force accomplishes all Recruit Training in six weeks. Course content concentrates on indoctrination subjects. Relatively little training in Service-wide skills is provided, since there are few common skills needed by all Air Force enlisted personnel. In addition to subjects oriented toward indoctrinating recruits to military life, the Navy course includes phases designed to prepare them for conditions in a fleet environment. The Navy must be sure that recruits learn to live, work, and fight in restricted space such as they will find on board ship, often close to complex machinery and weapons.

The average length of time spent in recruit status in any of the Services may be longer than the standard course lengths discussed above. Some recruits fall behind their peers because of illness. Others require remedial training. If this cannot be accomplished by additional instructional hours the recruit may be sent to a special training unit or recycled to a following class to repeat a portion of the course.

The common objective of transforming a civilian into a disciplined servicemember tends to set a floor under the length of Recruit Training in each of the Services. Relatively few recruits have had much experience with life in a disciplined environment, been separated from their families and friends, or subjected to the stresses imposed by military life. Compensating for these factors takes not only training but also time. A minimum of six weeks in Recruit Training appears necessary to accomplish this objective alone in any of the Services. Greater amounts of time are required for those Services that must provide extensive training in required common skills.

Enlisted members of the Reserve Components without prior service receive the same basic qualification training as active service members. Each non-prior service enlistee in the Reserve Components undergoes, as a minimum, the equivalent of twelve weeks of active duty training. This is accomplished by sending the enlistee through recruit training and in some cases on to initial skill training. Many Army Guardsmen and Reservists are provided similiar training in certain skills through One-Station Unit Training.

Attrition in Recruit Training

A final factor in the computation of loads is the projection of the rate and timing of attrition. Recruits may fail to complete training for medical reasons, inability to absorb the instruction, lack of motivation, disciplinary problems, or a variety of administrative causes, such as discharge for fraudulent enlistment or family hardship. Table III-4 shows projected attrition losses for FY 1988.

TABLE III-4.--Recruit Training Attrition Projections, FY 1988
(Active and Reserve Combined)
(Percent)

Army	Navy	Marine Corps	Air Force
11.9%	10.9%	14.8%	8.0%

The timing of attrition varies from case to case. In the case of slow learners or individuals who have difficulty in adjusting to military life, trainees usually are reentered or given special instruction; those who do not respond adequately may not become attrition losses until late in the course.

Army One-Station Unit Training

The Army's One-Station Unit Training (OSUT) program combines Recruit Training and Initial Skill Training for certain skills into a single continuous course. Consequently, this report treats OSUT separately rather than arbitrarily breaking it into two segments.

OSUT loads for FY 1983 through FY 1989 are shown in the following table.

TABLE III-5.--OSUT Training Loads, FY 1983-1989

Service Component	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
Army							
Active	15,657	14,192	11,883	10,223	9,177	9,520	9,831
Reserve	2,717	1,923	1,861	1,960	1,447	1,161	1,232
Natl Guard	5,860	4,873	5,278	4,505	4,930	4,766	4,783
Res/Gd Tot	8,577	6,796	7,139	6,465	6,377	5,927	6,015
DoD Total	24,234	20,988	19,022	16,688	15,554	15,447	15,846

OSUT training load data for FY 1986 through FY 1988 are shown in Table III-6.

TABLE III-6.--Training Inputs, Outputs, and Loads, OSUT, FY 1986-1988

Service Component	FY86 Load	FY87 Load	FY88 Input	FY88 Output	FY88 Load
Army					
Active	10,223	9,177	36,450	32,752	9,520
Reserve	1,960	1,447	6,111	5,604	1,161
Natl Guard	4,505	4,930	22,153	20,148	4,766
Res/Gd Total	6,465	6,377	28,264	25,752	5,927
DoD Total	16,688	15,554	64,714	58,504	15,447

In FY 1988, about 31 percent of active Army entrants to Recruit Training and 37 percent of Reserve Component entrants to Recruit Training will be trained under OSUT. OSUT training loads will decrease approximately 7 percent from FY 1986 to FY 1988. Much of the decrease is because the OSUT training conducted at Fort Bliss for Air Defense Artillery soldiers has ended. Since multiple military occupational specialties were being trained at Fort Bliss, soldiers finished their training at different times. A review of the program determined that it was more efficient to return to the mode of soldiers going to Recruit Training followed by Advanced Individual Training.

In FY 1988 there will be 12 different courses in OSUT that relate to Initial Skill Training. In general, OSUT requires less training time than the separate Recruit Training and Initial Skill Training courses that it replaced. Table III-7 shows training time for OSUT courses.

TABLE III-7.--OSUT Training Time, FY 1986-1988

Skill Area	Training Time (Weeks)		
	FY 86	FY 87	FY 88
Infantry	12.7	12.7	12.9
Artillery	13.5	13.6	13.6
Armor	13.7	13.7	13.7
Engineer	14.1	13.0	13.0
Military Police	17.0	17.0	17.0

The time that would be required to complete Recruit Training and the Initial Skill Training in separate courses for these skills would be about 4 weeks longer, including the time required to move the trainee from one training organization to another. The shorter OSUT course lengths provide a significant savings in trainee manyears and, consequently, in trainee pay, allowances, and support costs. Moreover, the Army's extensive tests of OSUT indicate that the quality of OSUT graduates is generally as good as the quality of personnel trained under the longer two-course training system.

IV

OFFICER ACQUISITION TRAINING

General Description

Officer Acquisition Training consists of training and education programs leading to a commission in one of the Military Services. These programs fulfill the need both for junior officer entrants into the career force and for non-career junior officers in the force structure. Officer Acquisition Training programs produce officers for both the active forces and the Reserve Components.

Training loads for Officer Acquisition Training are shown in Table IV-1 on the following page.

TABLE IV-1.--Total Officer Acquisition Training Loads, FY 1980-1989

Service Component	FY 80	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
Army									
Active	4,741	4,850	4,809	5,222	6,324	7,217	7,021	7,164	7,104
Reserve	5	4	3	4	9	125	187	284	253
Nat'l. Guard	42	49	27	44	41	79	124	200	192
Navy									
Active	5,661	6,498	6,497	6,446	6,678	6,566	6,420	6,408	6,390
Reserve	29	31	0	0	0	0	0	0	0
Marine Corps									
Active	249	281	432	294	289	327	400	314	319
Reserve	224	309	302	187	188	207	227	227	227
Air Force									
Active	6,032	6,050	6,555	6,457	6,230	5,974	5,490	5,340	5,368
Reserve	10	12	19	15	15	14	18	21	21
Nat'l. Guard	0	0	0	0	0	0	0	0	0
DoD									
Active	16,683	17,679	18,293	18,419	19,521	20,084	19,331	19,226	19,181
Res/Gd Total	310	405	351	250	253	425	556	732	693
DoD Total	16,993	18,084	18,644	18,669	19,774	20,509	19,887	19,958	19,874

Excluded ROTC and Health Professions Acquisition Programs

The total loads in Table IV-1 do not include two types of Officer Acquisition Training: the Army, Navy, and Air Force Reserve Officers Training Corps (ROTC) programs and the Armed Forces Health Professions Scholarship program. ROTC and Health Professions Scholarship students are not in active military status, whereas students who make up the training loads discussed in this report are either members of the active forces or members of the Reserve Components being trained on active duty by the active establishments. Although these two programs are not included in the requested training loads, they are discussed in this chapter to provide a complete account of Officer Acquisition Training. The following tables show the number of participants in these programs in the period FY 1986 through 1988.

TABLE IV-2.--Average Enrollees, Senior ROTC Programs, FY 1986-1988

Service	FY 1986	FY 1987	FY 1988
Army	60,329	63,755	66,253
Navy	10,460	10,595	10,275
Air Force	21,947	21,737	22,075
DoD Total	92,736	96,087	98,603

TABLE IV-3.--Health Professions Scholarships, FY 1986-1988

Service	FY 1986	FY 1987	FY 1988
Army	1,240	1,237	1,250
Navy	1,037	982	975
Air Force	1,299	1,281	1,300
DoD Total	3,576	3,500	3,525

The figures shown above for Health Professions Scholarships are actuals for FY 1986 and FY 1987; the FY 1988 figures are those currently authorized by DoD to each Service from the total of 5,000 authorized scholarships.

Junior ROTC is a program designed to develop leadership qualities, good citizenship, and an understanding of the basic elements of national security among high school students. Despite its name, it is not an officer acquisition program, since it does not result in a commission and its participants have no military obligation whatsoever. Junior ROTC is not included within training loads covered by this report.

Officer Requirements and Structuring the Officer Acquisition Program

Requirements for new officers, like requirements for new enlisted personnel, are a product of the need for officers in the projected force

as compared to the projected future inventory of officers. Properly functioning programs will meet those requirements for officer entrants for any given year, and provide the overall flow of sufficient new officers to each Service to avoid the creation of unmanageable shortages and overages by age and grade in the future. Each of the Services uses a mix of sources for new officers.

The mix of officer accession programs used must recognize the characteristics of each program. Some of the differing characteristics of current programs are: high quality, long lead-time; flexible inputs, short lead-time; high quality with comprehensive military indoctrination; and high level of technical skill. Additionally, consideration must be given to each program's ability to attract applicants, the quality of its graduates, and their probable retention and attrition. These differences and others are recognized and exploited in planning to meet requirements.

The Service Academies provide a long lead-time program that produces highly trained career military officers.

ROTC is also a long lead-time program and provides the largest single input of officers to the active duty force, although many of these officers will leave active duty and join the Reserve Components. In this manner, ROTC provides officers to support the total force, both active and reserve.

Officer Candidate/Training Schools provide the short lead-time commissioning source necessary to respond to immediate surges in officer requirements, since the programs can be expanded or reduced in a relatively short period of time.

The off-campus commissioning programs, such as the Marine Corps Platoon Leader Corps (PLC) program, are long lead-time programs, and provide the student at virtually any four-year college or university the opportunity to earn a commission through summer training but without military responsibilities during the school year. Finally, Other Enlisted Commissioning Programs are relatively long lead-time in nature, and provide a source of officers who possess specific technical skills and who have a proven [illegible] program. The lead-time for Other Enlisted Commissioning [illegible] is usually shorter than for Service Academies or ROTC because many participants have previous college credits, requiring [illegible] in their program.

In addition to these reasons for using a variety of sources to satisfy officer requirements, it is also desirable to use different sources to keep the officer corps from being restricted to a narrow segment of the nation's youth and to provide opportunities for highly qualified enlisted members.

Officer Acquisition Training may be divided into six separate programs:

Service Academies
ROTC
Officer Candidate Schools
Off-Campus Commissioning Programs
Enlisted Commissioning Programs
Health Professions Acquisition Programs

During FY 1986 the Navy instituted the Officer Sea and Air Mariner (OSAM) Program which provides another avenue of officer accessions directly into the Naval Reserve. The program covers all phases of training from Officer Candidate School to specific platform training in a designated warfare specialty. Once training is completed, after approximately two years, individuals are released from active duty and fill a Selected Reserve billet to complete a four year drilling obligation.

Service Academies

The mission of each of the Service Academies (United States Military Academy, United States Naval Academy, and United States Air Force Academy) is to meet a portion of the long-range requirement for career military officers. They provide instruction and experience to cadets or midshipmen so that they graduate with the knowledge and character essential to leadership and with the motivation to become career officers. Cadets and midshipmen receive a rigorous four year undergraduate college education which includes a technically oriented core curriculum regardless of major. Successful completion of the specified academic, leadership and military requirements entitles the graduate to a Bachelor of Science degree and a Regular commission in one of the Military Services. Up to one-sixth of Naval Academy graduates in each year may be commissioned in the Marine Corps.

The Service Academies are distinctive among the collegiate institutions of the nation in that their curricula are specifically designed to prepare young men and women for service as professional officers. The total curriculum at each Academy is designed to develop the qualities of character, intellect, and physical competence needed by the officer who may, in the course of a full career, be called upon to perform duties ranging from leading a small combat unit to advising the highest government councils. The programs include the sciences, the humanities, and military and physical training, and form the basis for further professional development or, when required, graduate education.

The enrollment of each of the Service Academies is established by law. This fact establishes stable training loads for the Academies. Training load data for the Service Academies are shown in Table IV-4.

TABLE IV-4.--Training Inputs, Outputs, and Loads, Service Academies, FY 1986-1988

Service	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army	4,771	4,757	1,350	1,026	4,847
Navy	4,397	4,341	1,330	1,039	4,328
Air Force	4,221	4,228	1,390	1,036	4,228
DoD Total	13,389	13,326	4,070	3,101	13,403

Each of the Military Departments sponsors an Academy preparatory school. Marine Corps and Coast Guard personnel attend the Navy school. The missions of these schools are to provide intensive instruction and guidance, in courses of instruction approximating one academic year, to selected enlisted personnel in preparation for entry to the Service Academies. Students compete for appointments by the Secretaries of the Military Departments and from other sources. The Naval Academy Preparatory School also provides instruction to candidates for the Marine Corps Enlisted Commissioning Education Program during the summer months. Training load data for the Academy preparatory schools is shown in Table IV-5.

TABLE IV-5.--Training Inputs, Outputs, and Loads, Academy Preparatory Schools, FY 1986-1988

Service	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army	228	233	340	237	247
Navy	212	212	309	200	212
Marine Corps	11	11	15	11	11
Air Force	200	210	260	190	210
DoD Total	651	666	924	638	680

ROTC Programs

ROTC is a long lead-time program which is the single largest source of officers for the Armed Forces. Like the Service Academies, ROTC is used to provide a relatively constant input of officers for active duty, but ROTC also provides non-career officers as well as career officers. The program is currently conducted at over five hundred civilian colleges and universities throughout the nation. The Army, Navy, and Air Force each sponsor an ROTC program; up to one-sixth of the Navy graduates may be commissioned in the Marine Corps. Scholarships and subsistence allowances authorized by law, in addition to conventional

recruiting and advertising methods, are used to attract qualified students. Scholarships are awarded to young men and women who exhibit potential ability and interest in fields of projected Service needs.

There are both scholarship and non-scholarship, as well as two-year and four-year, ROTC programs. The curriculum of each program is tailored to the needs of the individual Services. For example, the Navy teaches the basics of ship navigation, while the Army teaches the fundamentals of ground combat and the Air Force provides basic instruction in aerospace history and doctrine. Each of the programs includes instruction in leadership, military customs and military history, and each program provides prospective officers with a gradual transition from the civilian environment to the military environment. Each ROTC program consists of a series of regularly scheduled academic classes throughout the school year combined with mandatory summer camps or cruises which are designed to give the student realistic military experience and a first-hand view of military life.

The ROTC scholarship continues to be an important incentive to attract exceptionally qualified individuals to ROTC. The rising cost of education makes the scholarship even more attractive. The Congress increased the number of authorized ROTC scholarships from 19,000 in FY 1979 to 29,500 in FY 1982. The Army increased from 6,000 scholarships in FY 1979 to 12,000 authorized in FY 1981. The Navy increased from 6,000 to 8,000 and the Air Force from 6,500 TO 9,500 authorized scholarships in FY 1981.

The ROTC program is being expanded through the establishment of more host institutions and new extension centers. Students at an extension center participate in the ROTC unit of a larger host institution. This practice extends the ROTC option to students attending the numerous small colleges and universities not large enough in themselves to support a viable ROTC unit. The Army has expanded its program significantly since FY 1980 by adding 81 new extension centers. The Army now has 318 host institutions. The Navy has 65, and the Air Force has 153.

As noted at the beginning of this chapter, the ROTC program is not included in Service training loads because the students are not in an active military status. The following table shows the three Service ROTC programs for FY 1988.

TABLE IV-6.--Senior ROTC Programs in FY 1988

Service	Beginning Enrollments	Graduates	Average Enrollments	Average Number of Scholarship Enrollees
Army	68,485	8,203	66,253	12,000
Navy	10,250	1,870	10,275	7,925
Air Force	24,000	3,030	22,075	6,250
DoD Total	102,735	13,103	98,603	26,175

Off-Campus Commissioning Programs

The only Officer Acquisition Training program in which college students participate and is conducted off the college campus is the Marine Corps Platoon Leaders Class (PLC). This program provides for enlistment as a Marine Corps Reservist while the student is still an undergraduate and requires participation in summer military training.

Students participating in this program attend either one or two summer training sessions, depending upon when during their college career, they were enrolled. The objective of the program is to indoctrinate, motivate, and train the enrollees by providing instruction in basic military subjects, leadership, and physical training. PLC students are commissioned when their college degrees are conferred; the newly commissioned Marine Corps officers then attend The Basic School at Quantico, Virginia.

In conformance with the nature of this program, the training loads in Table IV-7 are based only on the time spent in summer training. Loads, consequently, are low as compared to inputs and outputs.

TABLE IV-7.--Training Inputs, Outputs, and Loads, Off-Campus Commissioning Programs, FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Marine Corps Reserve	207	227	1,990	1,572	227

Officer Candidate Schools (OCS)

Each of the Military Services operates an Officer Candidate School. The Air Force school is entitled Officer Training School (OTS).

Enlisted members can use this route to "rise from the ranks". The existence of OCS programs, and the other enlisted commissioning programs covered in the next section, is therefore a significant advancement incentive to ambitious and promising enlisted personnel.

The four Services offer direct entry into OCS to selected college graduates without previous enlisted service. Some college students in highly specialized academic disciplines, such as engineering and physical sciences, feel that they cannot afford the time required to participate in ROTC; OCS provides a way to a commission for these persons and, as well, for other well-qualified persons who desire to become officers after graduation from college.

The following table shows the lengths of the various courses.

TABLE IV-8.--Course Lengths (Weeks), Officer Candidate Schools

Army OCS	Navy OCS	Marine Corps OCS	Air Force OTS
14	16	10	13

Load data for OCS programs are shown in the following table.

TABLE IV-9.--Training Inputs, Outputs, and Loads, Officer Candidate Schools, FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	272	248	1,000	768	248
Reserve	5	17	440	337	109
Natl Guard	35	34	480	368	119
Navy					
Active	885	761	1,504	1,339	762
Reserve	0	0	0	0	0
Marine Corps					
Active	98	152	388	212	56
Reserve	0	0	0	0	0
Air Force					
Active	669	447	2,017	1,700	448
Reserve	14	18	95	77	21
Natl Guard	0	0	0	0	0
DoD					
Active	1,924	1,608	4,909	4,019	1,514
Gd/Res Total	84	69	1,015	782	249
DoD Total	1,978	1,677	5,924	4,801	1,763

Other Enlisted Commissioning Programs

The Services each have enlisted commissioning programs in addition to Officer Candidate Schools. The purposes of these programs are: (1) to provide a source of officers in specific skills with an expected high rate of retention; (2) to provide an avenue whereby enlisted personnel with proven qualifications can augment the commissioned ranks; and (3) to provide a measure of motivation to enlisted personnel. The Navy's Enlisted Commissioning Programs now number seven and and have a planned training load of 1,106 in FY 1988. A similar program, the Marine Enlisted Commissioning Education Program, has been expanded to offer degrees in technical and liberal arts academic disciplines. Students in the USAF Airman Education and Commissioning Program (AECP) major in engineering and computer science or physical science, with matriculation up to three years; the average academic time spent in the program is about 27 months. In the Navy, Marine Corps and Air Force, participants

attend the Officer Candidate School of their Service before they are commissioned. Like OCS/OTS, these education programs carry an active duty service requirement. The Navy will continue to emphasize enlisted commissioning programs to maintain officer procurement in FY 1988. The Air Force is reducing emphasis on these programs because of funding reductions. This year the Army began reporting the warrant officer certification program in this category. While the other Services' participants are all on active duty, the Army's program also includes the Reserve and National Guard.

The following table displays load data for these programs. All participants are members of the active forces.

TABLE IV-10.--Training Inputs, Outputs, and Loads, Other Enlisted Commissioning Programs, FY 1986-1988

Service	FY 86	FY 87	FY 88		
	Load	Load	Input	Output	Load
Army	390	557	3,707	3,645	592
Navy	1,072	1,106	1,347	1,033	1,106
Marine Corps	218	237	105	75	247
Air Force	691	405	100	103	254
DoD Total	2,371	2,305	5,259	4,856	2,199

Health Professions Acquisition Programs

This subcategory may be conveniently divided into two parts, the Armed Forces Health Professions Scholarship Program and the Uniformed Services University of the Health Sciences Program.

The Health Professions Scholarship Program was established in 1972 by Public Law 92-426. Participants are selected from among students, or those accepted for enrollment, in recognized health professions schools. Participants are commissioned in grade O1 in the Reserve of their parent Service, but, except for a short period of annual active duty, are not in active status. They are, therefore, not included within the training loads of their Services. Upon graduation, participants must serve obligated tours of duty, the length of which depends on the length of their participation in the program.

The program is authorized a total of 5,000 scholarships at its current level. Service data for FY 1988 are shown in Table IV-11.

TABLE IV-11.--Health Professions Acquisition Program, Scholarships Awarded and Graduates, FY 1988

Service	Scholarships	FY 1988 Graduates
Army	1,250	340
Navy	975	354
Air Force	1,300	339
DoD Total	3,525	1,033

An additional acquisition program for health professionals, the Uniformed Services University of the Health Sciences (USUHS), began operation in 1976. In accordance with PL 92-426, the student body of the USUHS is composed of commissioned officers of the Uniformed Services. The first students graduated from this program in 1980.

The USUHS plans an incoming class of 159 medical students in FY 1988. This institution will, over the long term, provide approximately 25 percent of DoD's projected physician requirements. Training inputs, output and loads for this DoD school for FY 1986-1988 are shown in Table IV-12.

TABLE IV-12.--Training Inputs, Outputs, and Loads, USUHS, FY 1986-1988

FY 86	FY 87	FY 88		
Load	Load	Input	Output	Load
673	669	159	159	669

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Table V-1.--Specialized Skill Training Loads, FY 1980-1989

Service Component	FY 80	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
Army a/									
Active	39,089	33,204	33,711	34,428	37,057	39,922	46,207	49,046	48,264
Reserve	3,677	4,500	4,305	4,683	5,157	5,902	9,632	9,863	10,310
Nat'l Guard	5,183	5,405	4,788	4,201	4,704	5,738	9,898	9,421	9,691
Navy									
Active	35,874	40,748	40,311	41,079	42,238	42,530	43,124	43,346	43,709
Reserve	469	556	635	1,110	1,677	1,926	1,950	1,673	1,855
Marine Corps									
Active	7,624	8,361	9,024	9,795	9,066	10,084	10,705	11,159	11,587
Reserve	504	618	680	937	1,267	1,500	1,596	1,884	1,919
Air Force									
Active	21,445	22,899	22,453	20,345	19,792	22,311	22,683	19,900	21,115
Reserve	591	788	841	1,258	902	1,042	1,419	1,430	1,420
Nat'l Guard	1,031	1,181	1,401	1,338	2,460	1,774	1,397	1,695	1,559
DoD									
Active	104,032	105,212	105,499	105,647	108,153	114,847	122,719	123,451	124,672
Gd/Res Total	11,455	13,048	12,650	13,527	16,167	17,632	25,592	25,966	26,572
DoD Total	115,487	118,260	118,149	119,174	124,320	132,479	148,311	149,417	151,244

a/ Data do not include Army One-Station Unit Training loads.

As in the other types of training covered in this report, the demand placed on the training establishment for individuals with certain skills is determined by comparing projected requirements for each skill and skill level with the projected future inventory of trained service members.

When anticipated losses are deducted from the current inventory, shortages in various skill areas are revealed. These shortages, except for those that can be satisfied through on-the-job training, or, in a few cases, through lateral entry from civilian life of individuals who already possess needed job skills, create a demand for a phased output of trained replacement personnel. Also, estimates are made of the proportion of students in each training course who will fail to complete the course. These course attrition factors determine the inputs necessary to achieve the desired course outputs. Inputs, outputs, attrition patterns, and course lengths determine the training loads. These factors are discussed for each sub-category of Specialized Skill Training in the remainder of this chapter.

One of the challenges facing the Reserve Components is the improvement of the process to match individuals to billets that carry the appropriate military occupational specialty or rating. The majority of the specialties or ratings require formal school training prior to designation. Since limited availability for active duty prevents members of the Selected Reserve from attending many formal schools, initial skill training programs are being developed to train prior-service Reservists in selected occupational specialties using combinations of two week formal schools, on-the-job training, correspondence courses, mobile training teams, and civilian vocational technical courses.

Specialized Skill Training is the most diverse of the major categories of individual training. In the interest of clarity, the full category has been divided into five sub-categories. Two are concerned with initial skill training, one for officers, the other for enlisted personnel; two others cover more advanced training, again divided by officer and enlisted. The last category covers both officer and enlisted training which, for the most part, imparts required knowledge or skills without changing the student's primary skill or skill level.

In 1986 the Army conducted a thorough review of the OSD course type codes used in the Army Program for Individual Training (ARPRINT). Code corrections and changes that were made are reflected in the FY 1988 Military Manpower Training Report. While some training changed categories, the major impact occurred in the Specialized Skill Training category. Initial skill and skill progression training for enlisted personnel is considerably higher than reported in the FY 1987 Military Manpower Training Report. These changes do not reflect an increase in training in these categories, rather a more accurate classification of the Army's training courses. The tables in this chapter use the revised classification system for FY 1986 and following years.

Initial Skill Training (Enlisted)

Initial Skill Training (Enlisted) includes all formal training normally given immediately after Recruit Training and leading toward the award of a military occupational specialty or rating at the lowest skill level. Successful completion of the training qualifies the enlisted member to take a position in the job structure of the Service and to progress, through job experience, to the journeyman level. Army One-Station Unit Training satisfies this same purpose but, because it combines the skill training with recruit training in a single course, it is treated separately in this report.

The great majority of Service recruits are drawn from the least skilled segment of the population. Most recruits are under age 21 and have little civilian job experience. In addition, some civilian specialties are not in demand in the military job structure, and many of the most important military skills have no civilian counterpart. Consequently, only a small number of people enter the Service with a skill that can be used with little or no additional training, and enlistees must be trained in a technical skill before they can become productive. Some skills can be acquired through experience and on-the-job training. The vast majority, however, are most effectively and efficiently learned through formal courses. In some situations, on board ship or in remote locations for example, the opportunity for on-the-job training is often limited.

Load data for Initial Skill Training (Enlisted) are displayed in Table V-2. The classification of this training is determined by its purpose, rather than by whether entrants attend immediately after Recruit Training. Thus some prior-service students and cross-trainees from other skill areas are reflected in these data.

Table V-2.--Training Inputs, Outputs, and Loads, Initial Skill Training (Enlisted), FY 1986 - 1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	18,031	21,608	103,930	95,180	22,643
Reserve	3,932	5,709	29,636	26,648	5,664
Natl Guard	4,300	7,172	30,573	27,888	6,574
Navy					
Active	22,949	23,055	169,239	152,388	23,192
Reserve	1,332	1,305	9,342	9,018	1,298
Marine Corps					
Active	6,580	6,906	36,013	34,061	6,900
Reserve	1,317	1,397	10,725	10,075	1,658
Air Force					
Active	14,690	14,953	56,557	52,780	13,103
Reserve	796	1,121	4,554	4,276	1,122
Natl Guard	1,415	886	7,933	7,429	1,015
DoD					
Active	62,250	66,522	365,739	334,409	65,838
Gd/Res Total	13,092	17,590	92,763	85,334	17,331
DoD Total	75,342	84,112	458,502	419,743	83,169

New mission requirements and technological change have resulted in consolidation or splitting skill areas and extensive modification of existing training programs. For instance, the introduction of word processors and microcomputers into Air Force duty sections of personnel administration and operations resource management has increased the percentage of new accessions requiring formal training for these skills.

Prior to FY 1983, Naval Reserve personnel mobilization requirements were met primarily with Navy veterans (E-4 thru E-6) who became affiliated with the Naval Reserve. However, these personnel exceeded mobilization rate requirements (E-1 thru E-3) and many could not qualify for Reserve peculiar missions without extensive retraining. Therefore, the Navy initiated the Enlisted Sea and Air Mariner (ESAM) Program to meet E-1 through E-4 Navy Manpower Mobilization System (NAMMOS) personnel requirements. The ESAM Program enables the Naval Reserve to tailor individual training to attain personnel mobilization requirements in both critical skill areas and desired ranking (E-1 thru E-4). ESAMs are Selected Reservists placed on extended active duty while completing necessary formal training. Upon completion of training they report to the Naval Reserve Force for proficiency training and qualification. The proficiency or operational training is not included in the training loads of this report.

Reserve trainees graduating from recruit training proceed to Initial Skill Training in their occupational specialty. This may consist of a course in a Service school or Advanced Individual Training at an Army training center. If a course in the proper skill is not available, the trainee may be assigned to on-the-job training in an active duty for training status. The actual length of active-duty training, in comparison with the statutory twelve weeks minimum, varies from twelve weeks to twelve months, depending on the occupational specialties involved. To accomodate the Reserve Component member, the split-training program allows completion of initial entry training over a period of normally less than two years in two training periods.

Marines continue to serve in worldwide locations where terrorism remains a constant threat. In meeting this challenge, the Marine Corps has established a program of terrorism counteraction training. Classes range from two hours at recruit training to 25 hours for officer students at the Marine Corps Command and Staff College. Similarly, attendance at other service schools instructing measures to combat terrorism has also increased. For FY 1988, approximately 1000 Marines are expected to attend specialized skills schools where these measures are taught.

Reflecting the variety of skills required in the four Services, there are a large number of courses for enlisted personnel in Initial Skill Training, as shown in the following table.

Table V-3.--Number of Courses, Initial Skill Training (Enlisted), FY 1988

Army a/	Navy	Marine Corps	Air Force
446	165	326	277

a/ This does not include 12 courses that will be trained under OSUT.

Initial Skill courses include general skills, intelligence, cryptography, and health service training. Some of these courses are in highly technical skills, such as nuclear reactor specialist or electronics technician. Others involve less complex, but not less important, skills -- cook, clerk-typist, and vehicle driver. A sampling of courses in each Service with the most students in FY 1988 is shown in the Table V-4.

Table V-4.--Initial Skill Training Courses with High Student Flow, FY 1988

	No. of Students	Course Length (in weeks)
Army a/		
Medical Specialist	9,256	10.0
Administrative Specialist	5,364	9.4
Petroleum Supply Specialist	4,088	9.3
Unit Supply Specialist	4,026	7.3
Motor Transport Specialist	3,862	8.0
Equipment Records and Parts Specialist	3,745	10.3
Navy		
Apprentice Training b/	23,004	4.0
Basic Electricity and Electronics	16,518	10.0
Enlisted Basic Aviation Training	12,640	2.0
Propulsion Engineering Basics	8,333	4.0
Hospital Corpsman "A" School	6,445	10.0
Basic Enlisted Submarine	5,234	5.5
Marine Corps		
Rifleman	5,368	5.0
Motor Vehicle Operator	2,901	7.0
Field Radio Operator	2,329	8.0
Basic Typing and Personnel Administration	1,924	2.0
Automotive Organizational Maintenance	1,574	15.0
Mortarman	1,194	7.0
Air Force		
Security Specialist	4,349	6.0
Administrative Specialist (General)	3,325	6.0
Tactical Aircraft Maintenance	3,245	7.0
Inventory Specialist	2,455	6.0
Law Enforcement Specialist	2,381	7.0
Strategic Aircraft Maintenance	1,850	7.0

a/ Many of the Army high-density skills and most combat skills (armor crewman, artilleryman, etc.) are trained through One-Station Unit Training (OSUT).

b/ Apprentice Training is composed of fundamental training in one of four basic skill areas: Seaman, Fireman, Airman, Constructionman. The course length shown is the average for those four skills.

Course lengths vary widely often based on the complexity of the subject matter. For example, the Air Force course for cytotechnology specialists is 52 weeks long; whereas the course for packing specialist is only 3 weeks long. Table V-5 shows the average course lengths for the Services' Enlisted Initial Skill Training.

Table V-5.--Average Course Lengths, Academic Days in Training (Enlisted), FY 1988

Army	Navy	Marine Corps	Air Force
55	58.8	56	73

The final determinant of training loads is the anticipated rate of attrition. Attrition rates must be estimated for each course. The rate may be negligible for a reasonably routine course for which students entered in the course have the necessary abilities and motivation. Attrition may run much higher, up to one-third of the class entrants, in complex technical courses. In contrast to policies governing Recruit Training, many of the students who fail to complete these courses are retrained in other, less difficult, skills rather than discharged. The average anticipated rates for FY 1988 are as shown below.

Table V-6.--Average Attrition Rates, Initial Skill Training (Enlisted), FY 1988
(Percent)

Army	Navy	Marine Corps	Air Force
8.8%	8.5%	5.0%	6.5%

Skill Progression Training (Enlisted)

This sub-category covers skill training received by enlisted personnel subsequent to Initial Skill Training. Through this training, the student gains the knowledge to perform at a more skilled level or in a supervisory position. Skill Progression Training is most frequently given after servicemembers have gained experience through actual work in their specialty. In some cases, however, training in a relatively narrow subject area as an immediate follow-on to Initial Skill Training is included in Skill Progression Training.

Training load data for Skill Progression Training (Enlisted) are shown in the following table.

Table V-7.--Training Inputs, Outputs, and Loads, Skill Progression Training (Enlisted), FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	8,436	8,642	69,550	66,229	9,386
Reserve	235	1,344	5,329	4,636	1,334
Natl Guard	507	964	7,777	7,301	1,072
Navy					
Active	12,613	12,676	120,895	117,817	12,650
Reserve	94	148	1,371	1,284	178
Marine Corps					
Active	1,611	1,649	15,127	15,105	2,066
Reserve	95	101	1,537	1,514	117
Air Force					
Active	5,808	6,087	73,528	71,381	5,290
Reserve	110	137	1,890	1,859	138
Natl Guard	257	332	5,520	5,323	319
DoD					
Active	28,468	29,054	279,100	270,532	29,392
Gd/Res Total	1,298	3,026	23,424	21,917	3,158
DoD Total	29,766	32,080	302,524	292,449	32,550

The requirement for Skill Progression Training arises from the fact that training in a skill at entry level and subsequent experience do not, in many cases, fully qualify servicemembers to do the more advanced jobs in their field without further formal training. Several factors may contribute, singly or in combination, to a need for additional formal training:

1. The introduction of new equipment.

2. The need to produce a higher degree of skill in a sub-specialty.

3. The need to impart a broader base of knowledge to qualify an individual for a supervisory responsibility.

4. The requirement for refresher training to bring the service-member up to date on the latest information and techniques in a skill.

The primary need, as in all other types of training, is to have trained individuals available to replace losses as they occur. Planning future training in this sub-category follows the same general pattern as for Initial Skill Training. Some additional complications, however, are introduced by the fact that members eligible for schooling are frequently serving overseas or on board ship, rather than flowing from the Recruit Training pipeline. This situation frequently requires that personnel receive the training when they are available, preferably between duty assignments, rather than when they might more easily be accommodated for formal school training. Reserve Component personnel have similar difficulties because of civilian employer committments.

The following table displays statistics in Skill Progression Training in each of the Services for FY 1988.

Table V-8.--Courses, Course Lengths, and Projected Attrition, Skill Progression Training (Enlisted), FY 1988

	Army	Navy	Marine Corps	Air Force
Number of Courses	337	1,653	161	814
Average Course Lengths (Academic Days)	32	33.8	58	20
Projected Attrition Rate (Percent)	5.4%	3.4%	4.8%	2.0%

The Air Force's average days in training is low compared to the other Services because of the large use of short courses. The large number of Navy and Air Force courses is a reflection of the technical nature of these Services and their large number of subspecialties. Of course, part of the difference is due to differing Service approaches to course definition and segmenting.

Initial Skill Training (Officer)

As a general rule, Officer Acquisition Training is oriented toward the broad educational background and general military training which is considered necessary for all officers entering a Service. In consequence, most newly commissioned officers require further training for the specific type of duty they will be performing in their first duty assignment. Initial Skill Training for officers is, therefore, analogous to Initial Skill Training for enlisted personnel -- both provide the job-oriented training which, added to the military fundamentals learned earlier, prepares the individual for taking a place in the job structure.

Load data for Initial Skill Training (Officer) are displayed in the following table.

Table V-9.--Training Inputs, Outputs, and Loads, Initial Skill Training (Officer), FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	2,337	2,519	9,581	9,342	2,644
Reserve	1,142	1,353	5,753	5,580	1,420
Natl Guard	478	828	2,979	2,897	822
Navy					
Active	1,400	1,500	4,759	4,709	1,500
Reserve	9	9	170	160	9
Marine Corps					
Active	903	895	2,728	2,488	864
Reserve	16	16	103	101	16
Air Force					
Active	873	759	4,802	4,681	712
Reserve	38	49	486	478	59
Natl Guard	49	78	892	863	96
DoD					
Active	5,513	5,673	21,870	21,220	5,720
Gd/Res Total	1,732	2,333	10,383	10,079	2,422
DoD Total	7,245	8,006	32,253	31,299	8,142

With minor exceptions, all newly commissioned Army officers attend officer basic courses at their branch schools -- Infantry officers at the Infantry School, Engineer officers at the Engineer School, and so forth. These courses average 14 weeks in length, and officers attend before reporting to their first unit of assignment. In addition, certain officers are selected to attend follow-on skill or functional training courses for more specialized assignments.

All submarine and nuclear officers and most Surface Navy officers go to Initial Skill Training. The Navy provides 29 courses for officers in Initial Skill Training, with an average course length of 83 days.

All newly commissioned Marine Corps officers attend a basic course for general orientation and training. In addition, most Marine Corps officers attend one of the 75 Initial Skill Training courses sponsored by the Corps. They may also participate in others conducted by the Navy or other Services. Such courses average 68 days in length and are related to specific officer jobs.

The Air Force conducts 42 Initial Skill Training courses for officers, with an average length of 49 days. About 78 percent of newly commissioned officers attend these courses, some immediately after commissioning and others after spending some time at their first duty assignment.

Skill Progression Training (Officer)

Skill Progression Training for officers is, in general, aimed at officers with several years of practical experience and provides them knowledge needed to assume more advanced responsibilities. For example, the Army provides advanced courses which are structured to prepare the students for battalion and brigade staff duties in addition to command responsibilities at the company and battery level. Data for Skill Progression Training (Officer) are displayed in the following table.

Table V-10.--Training Inputs, Outputs, and Loads, Skill Progression Training (Officer), FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	2,995	4,097	15,521	15,164	4,335
Reserve	246	387	3,809	3,636	358
Natl Guard	238	332	1,888	1,816	338
Navy					
Active	1,156	1,227	11,161	10,898	1,228
Reserve	14	9	306	306	9
Marine Corps					
Active	348	406	3,791	3,720	458
Reserve	8	9	240	238	10
Air Force					
Active	665	597	10,671	10,172	508
Reserve	81	86	1,234	1,165	85
Natl Guard	42	63	3,704	3,516	227
DoD					
Active	5,164	6,327	41,144	39,954	6,529
Gd/Res Total	629	886	11,181	10,677	1,027
DoD Total	5,793	7,213	52,325	50,631	7,556

The Army conducts 147 courses averaging 60 days in length. The Navy maintains 160 courses, averaging 44 days in length, which cover a variety of specialized duties that are typically performed by officers with several years of service -- for example, aviation maintenance officer course and nuclear propulsion plant course.

Both the Marine Corps and the Air Force conduct broad courses for officers at about the same level as the Army's advanced courses; however, as these are service-wide and uniform in content, they are carried in Professional Development Education. Within Skill Progression Training, Marine Corps officers attend 37 courses, averaging 48 days in length, sponsored by the Corps. They also utilize the course offerings of the other Services. The Air Force has 260 courses, averaging 19 academic days each, for the purpose of training officers in new duties required by their prospective assignments.

Attrition from the Skill Progession courses for officers is significantly lower than for enlisted training or initial skill officer training. Attrition of one to two percent is typical of such courses.

The Air National Guard (ANG) also conducts specialized skill progression training in several aviation disciplines at ANG installations instead of Air Force facilities because of constrained training time available for the reservist, geographic dispersion of units, availabilty of training equipment, and location of training areas.

Functional Training (Officer and Enlisted)

Functional Training is an "all other" sub-category covering those types of required training that do not fit neatly into the definitions of the other sub-categories. By and large, Functional Training is in subject areas that cut across the scope of military occupational specialties and provides additional required skills without changing the student's primary speciality or skill level. Both officers and enlisted personnel participate in Functional Training. Load data for Functional Training are shown in the Table V-11.

Table V-11.--Training Inputs, Outputs, and Loads, Functional Training (Officer and Enlisted), FY 1986 - 1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	8,123	9,341	91,724	82,651	10,038
Reserve	347	839	9,635	8,601	1,087
Natl Guard	215	602	8,399	7,594	615
Navy					
Active	4,412	4,666	440,822	429,222	4,776
Reserve	227	179	16,671	15,761	179
Marine Corps					
Active	642	849	10,620	10,562	871
Reserve	64	73	1,646	1,634	83
Air Force					
Active	275	287	10,436	10,277	287
Reserve	17	26	690	666	26
Natl Guard	11	38	1,330	1,323	38
DoD					
Active	13,452	15,143	553,602	532,712	15,972
Gd/Res Total	881	1,757	38,371	35,579	2,028
DoD Total	14,333	16,900	591,973	568,291	18,000

Army Functional Training includes the airborne, ranger, and special forces qualification courses, many specialized NCO supervision courses, language training, and a number of courses related to specialized equipment (e.g., Satellite Communication Operation and Maintenance; 8-inch Atomic Projectile Assembly).

Navy Functional Training differs from that of the other Services because of the very high input to a large number of very short courses. Most of the training is conducted during in-port periods for ships' crews, and includes the following types of activity:

1. Shore training for shipboard teams (firefighting, damage control, anti-submarine warfare, and so forth).

2. Short basic or refresher courses at fleet training centers in the operation of equipment or systems.

3. Shipboard in-port training assistance.

4. Precommissioning training for newly formed crews of ships under construction.

Marine Corps functional training provides skills necessary to perform a specific mission outside of the normal primary occupational specialty. Examples of functional training courses taught at Marine institutions are range officer, aerial observer, field grade officer winter warfare planning, scout/sniper, mountain survival, and drill instructor training.

All Air Force Functional Training is survival training related to various environments: water, arctic, jungle, or tropic. These courses train air crews in the skills for long-term combat survival and survival in chemical, biological, and radiological contaminated environments.

The following table provides additional statistics on Functional Training.

Table V-12.--Courses and Course Length, Functional Training, FY 1988

	Army	Navy	Marine Corps	Air Force
Number of Courses	780	827	61	7
Average Course Length (Days)	24	4	27	10

VI

FLIGHT TRAINING

General Description

Flight Training programs provide basic flying skills required prior to operational assignment of pilots, navigators, and naval flight officers. Most of the training in this category is undergraduate flight training; at the conclusion of this training, a graduate is awarded "wings" and is classified as a "designated" or "rated" officer. Flight Training includes programs for pilots of all Services, navigators in the Air Force, and naval flight officers in the Navy and Marine Corps. Pilot training may be in jet or propeller-driven fixed-wing aircraft, or in helicopters. Some related advanced flight training, such as Army instructor pilot training is also included in Flight Training. Enlisted programs in aviation-related subjects (for example, in air traffic control) and Air Force survival training are in Specialized Skill Training. Marine Corps enlisted navigator training is included in Flight Training.

During FY 1986, the Navy opened flight training to a limited number of reservists to fill critical billets as Naval Flight Officers. The students enter the pipeline on extended active duty and are trained at the Aviation Officers Candidate School (AOCS) with their active duty counterparts. After completing all formal specific aircraft training, they are released from active duty to receive their proficiency training with a Naval Air Reserve squadron. The proficiency or operational training is not included in the training loads of this report.

Generally, however, Reserve Component participation in Flight Training is relatively minor, since most aviator requirements in Reserve units are filled by experienced aviators who join after extended service in the active components.

Flight Training loads, by Service and component, for Fiscal Years 1980 through 1989 are shown in Table VI-1.

Table VI-1.--Total Flight Training Loads, FY 1980-1989

Service	FY 80	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
Component									
Army									
Active	1,204	1,197	1,455	1,128	1,086	953	1,082	1,241	1,199
Reserve	31	46	50	68	97	89	178	186	185
Natl Guard	80	86	206	203	201	245	223	272	261
Navy									
Active	1,253	1,993	1,712	1,635	1,760	2,075	2,137	2,210	2,246
Marine Corps									
Active	790	676	647	759	527	529	499	509	529
Air Force									
Active	2,467	3,117	3,170	3,001	2,880	2,833	2,962	2,654	2,597
Reserve	51	52	63	56	55	51	68	65	72
Natl Guard	128	244	234	193	187	177	211	196	190
DoD									
Active	5,714	6,983	6,984	6,523	6,253	6,390	6,680	6,614	6,571
Res/Gd Tot	303	428	553	520	540	562	680	719	708
DoD Total	6,004	7,411	7,537	7,043	6,793	6,952	7,360	7,333	7,279

Flight Training loads were reduced by approximately 45 percent over the period FY 1975 to FY 1978 because of the net effect of the following factors:

- Peacetime reductions in active force aviator requirements in all Services, except for moderate increases in Army aviator requirements associated with the 16-division force objective in the last years.

- Restriction of undergraduate flight training for Reserve Component members to the number needed to fill positions in reserve aviation units that could not be filled through recruitment of experienced aviators leaving active duty -- as, for example, positions in aviation units that are remote from major population centers.

The Service trends for flight training in FY 1988 call for maintaining the rates of training initiated in FY 1979. The rates reflect an ongoing effort to return pilot and navigator inventories to long-term sustainable levels, levels which in the late 1970s were adversely affected by several years of unexpectedly high attrition rates for flying personnel. More undergraduate helicopter pilot training for the Army's reserve components is planned. This will increase the Army's reserve pilot inventories and increase the deployability of reserve air detachments.

For purposes of clarity, the following discussion of aviation training is divided into three sections -- Undergraduate Pilot Training, Navigator Training, and All Other Flight Training.

Undergraduate Pilot Training

Undergraduate Pilot Training qualifies students to perform the basic flight duties and to assume the responsibilities of military pilots. Air Force courses include sufficient flying training to allow the student to attain proficiency in the general class of aircraft (fixed wing or rotary wing) flown in future assignments. Flying training is augmented by flight-related ground training and simulator training. Also included is officer professional development training which prepares students for the responsibilities of a junior officer. The Army uses a large number of warrant officer pilots. Enlisted entrants undergo warrant officer candidate training before entering flight phases of training, and receive their warrants upon graduation from flight training. A few Army flight training students are already commissioned officers or warrant officers upon entry. The Navy conducts officer training for naval aviation officer candidates concurrent with the early phases of flight training.

Training data for FY 1986-1988 are displayed in the following table.

Table VI-2.--Training Inputs, Outputs, and Loads, Undergraduate Pilot Training, FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	714	698	1,267	1,098	861
Reserve	78	144	216	192	149
Natl Guard	207	156	265	228	180
Navy					
Active	1,463	1,471	1,640	1,117	1,519
Marine Corps					
Active	491	462	427	328	465
Air Force					
Active	1,724	1,683	1,968	1,600	1,582
Reserve	39	46	55	50	46
Natl Guard	135	131	167	138	133
DoD					
Active	4,392	4,314	5,302	4,143	4,427
Gd/Res Total	459	477	703	608	508
DoD Total	4,851	4,791	6,005	4,751	4,935

Load data for each Service for undergraduate helicopter pilot training are shown in Table VI-3.

Table VI-3.-- Training Inputs, Outputs, and Loads, Undergraduate Helicopter Pilot Training, FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	714	698	1,267	1,098	861
Reserve	78	144	216	192	149
Natl Guard	207	156	265	228	180
Navy					
Active	424	429	542	372	451
Marine Corps					
Active	266	239	237	193	239
Air Force					
Active	58	58	28	25	20
Natl Guard	2	2	3	3	2
DoD					
Active	1,462	1,424	2,074	1,688	1,571
Gd/Res Total	287	302	484	423	331
DoD Total	1,749	1,726	2,558	2,111	1,902

The following table shows programmed course lengths and projected attrition rates for the Army undergraduate helicopter pilot training program.

Table VI-4.-- Course Lengths and Attrition Rates, Army Undergraduate Helicopter Pilot Training, FY 1988

	Commissioned Officers	Warrant Officer Candidates Officer Training	Warrant Officer Candidates Flight
Course Length (weeks)	36.4	6.8	36.4
Attrition Rate	10%	10%	16%

The Army course is 6.8 weeks longer for warrant officer candidates than for commissioned officers, since the course also serves as a warrant officer candidate school.

Navy Undergraduate Pilot Training begins with a common core of basic ground training and primary flight training and then diverges according to whether the student is to be qualified in jet aircraft, propeller aircraft or helicopters. The basic ground phase, or aviation pre-flight indoctrination, is six weeks in length for officer students and 14 weeks for aviation officer candidates, since this phase also serves as an officer training period for the latter group.

The following table shows course lengths, attrition rates, and type of aircraft used for training for each phase of the syllabus.

Table VI-5.--Course Phasing, Navy/Marine Corps Undergraduate Pilot Training, FY 1988

Course/Phase	Course Length (Weeks)	Attrition Rate (Percent) NAVY	Attrition Rate (Percent) USMC	Type Aircraft
Commissioned Officers Aviation Pre-flight Indoctrination	6	9%	2%	-
Aviation Officer Candidates	14	15%	NA	-
Primary Training (Jet, Prop, Helo)	22	13%	13%	T-34C
Strike Training (Jet)				
Intermediate	25	6%	6%	T-2C
Advanced	20.6	8%	8%	TA-4J
Maritime Training (Prop)				
Intermediate	5.2	1%	1%	T-34C
Advanced	18.4	6%	6%	T-44A
E-2/C-2 Training				
Intermediate E-2/C-2	2.8	1%	NA	T-34C
Intermediate Jet (CQ)	21.6	6%	NA	T-2C
Advanced Prop	5.6	1%	NA	T-44A
Helicopter Training				
Intermediate	5.2	1%	1%	T-34C
Transition	7.6	1.5%	1.5%	TH-57
Advanced	14.6	2%	2%	TH-57

Because of the task requirements which dictate variations in course content, the standard Undergraduate Pilot Training course is as short as 53 weeks for an officer student qualifying in helicopters or as long as 82 weeks for an aviation officer candidate qualifying in jets. Actual course duration may be longer because of unforeseen circumstances such as major aircraft groundings, fuel shortages, or inclement weather.

The following table displays load data for Navy and Marine Corps Undergraduate Pilot Training. All participants are in the active force.

Table VI-6.--Training Inputs, Outputs, and Loads, Navy/Marine Corps Undergraduate Pilot Training, FY 1986-1988

Service	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Navy					
Strike	668	660	614	401	677
Maritime	371	382	484	344	391
Helo	424	429	542	372	451
Total	1,463	1,471	1,640	1,117	1,519
Marine Corps					
Jet	205	192	157	109	195
Prop	20	31	33	26	31
Helo	266	239	237	193	239
Total	491	462	427	328	465

The final program of Undergraduate Pilot Training is training of Air Force fixed wing jet pilots. Air Force helicopter pilots are trained in the Army program. The majority of Air Force fixed wing pilots are trained in the all-jet USAF Undergraduate Pilot Training program. The standard course length is 50 weeks. Forecast attrition for FY 1988 is 19 percent, not including flight screening programs.

In addition, approximately 110 Air Force pilots will be trained annually in the EURO-NATO Joint Jet Pilot Training (ENJJPT) program. ENJJPT is a cooperative undergraduate pilot and pilot instructor training program that began operation on 1 October 1981 at Sheppard Air Force Base,Texas. It is the most significant project of its type that has been undertaken among Allies during peacetime. The nations involved in the program are Belgium, Canada, Denmark, Germany, Greece, Italy, Netherlands, Norway, Portugal, Turkey, United Kingdom, and the United States. ENJJPT is based on the principles of proportionate sharing of program costs and proportionate instructor pilot manning. Forecast attrition for the program is 15.7 percent and the course length is 56 weeks.

Load data for both standard Air Force pilot training and ENJJPT are shown in Table VI-7.

Table VI-7.--Training Inputs, Outputs, and Loads, Air Force Undergraduate Jet Pilot Training, FY 1986-1988

	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Active	1,666	1,625	1,940	1,575	1,562
Reserve	39	46	55	50	46
Natl Guard	133	129	164	135	131
Total	1,838	1,800	2,159	1,760	1,739

At the conclusion of Undergraduate Pilot Training, the new pilot is capable of operating an aircraft in such a manner that future training requirements, in order to accomplish a specific mission, are limited to advanced flight training in aircraft used in operational units and training in the employment of applicable mission weapon systems.

Undergraduate Navigator Training

The Navy trains Navy and Marine Corps personnel to become Naval Flight Officers. The Air Force trains its personnel as navigators. The duties of Naval Flight Officers and Air Force navigators are not precisely the same because of mission differences. But at the undergraduate level, they are sufficiently similar that they are referred to collectively in this report as "navigators" (The Army does not train or use navigators).

The Undergraduate Naval Flight Officer (NFO) training program is a building block training program. The training commences with Aviation Pre-flight Indoctrination (6 weeks for officers) or Aviation Officer Candidate School (14 weeks for officer candidates) where the student is provided basic aeronautical and aviation physiological foundation knowledge. After completing this phase, the student enters the Basic phase. This 15 week course provides the student with the basic skills and knowledge needed to safely navigate, communicate, manage aircraft systems, and to describe two-plane formation maneuvers. Successful completion of Basic qualifies students for entrance into Interservice Undergraduate Navigation Training (22 weeks) conducted at Mather AFB, California (described in a later paragraph), or the Navy Intermediate Phase. The Intermediate Phase (13 weeks) expands the knowledge gained in Basic and requires higher skill and performance standards. Practical flight skills are developed in the ID-23 Computerized Navigation/ Communications Training Device; the 2B37 T-34C Simulator; the 2F101 T-2 Simulators; the T-2B aircraft for jet acclimatization and high speed navigation; the T-47A aircraft for jet instrument navigation; and the T-34C aircraft for formation visual navigation, instrument navigation,

and advanced performance maneuvers. After successful attainment of the performance standards, the students proceed to one of the following advanced Naval Flight Officer Training phases which provides specific skills and knowledge: Radar Intercept Officer (RIO) (19 weeks), Tactical Navigation (TN) (15 weeks), Overwater Jet Navigation (OJN) (19 weeks), and Airborne Tactical Data Systems (ATDS) (15 weeks).

The advanced segment of Undergraduate Navigator Training for Naval Flight Officers destined for the Multi-Engine Land Base Community is now managed by the Naval Air Training Unit (NAVAIRTU) at Mather AFB. Navigator candidates receive 320 hours of academic instruction, 78 hours of simulator training, and 80 hours of flight instruction in the T-43 aircraft during 23 weeks of training. This training provides sufficient skills and knowledge so that further training for the newly rated navigator can be limited to flight training in operational aircraft and training in employment of applicable weapons systems.

NFO training achieved full training capability in the T-34 aircraft in both Basic and Intermediate phases in FY 1985. This aircraft allows for increased hands on training. The T-47 was introduced to NFO training and achieved initial training capability in VT-10 Intermediate and RIO phases in FY 1985. T-47 full training capability was achieved in FY-1986. The T-47 replaced the T-39 aircraft.

The Air Force program consists of a 14 week basic course that includes 266 hours of academic instruction, 35 hours of flight simulator training, 22 hours of actual flight instruction in the T-43 aircraft, and 5 hours in the T-37 aircraft. T-37 hours in this phase will be reduced from 5 hours to 2.5 hours beginning in FY 1988. After the core course, students will attend one of three follow-on courses: Fighter, Attack, and Reconnaissance (FAR); Tanker, Transport, and Bomber (TTB); or Electonic Warfare Officer Training (EWOT). The FAR course provides 250 academic hours, 64 simulator hours, 14 T-37 hours, and 24 T-43 hours. The TTB trainee receives 300 academic hours, 68 simulator hours, and 88 T-43 hours. EWOT provides 431 academic hours, 63 simulator hours, and 28 T-43 hours.

Undergraduate Navigator Training provides sufficient skills and knowledge so that further training for the newly rated navigator can be limited to advanced flight training in operational aircraft and training in employment of applicable weapon systems. Training load data for Undergraduate Navigator Training are shown in the following table.

Table VI-8.--Training Inputs, Outputs, and Loads, Undergraduate Navigator Training, FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Navy					
Active	576	596	950	600	621
Marine Corps					
Active	38	37	58	30	44
Air Force					
Active	410	602	1,350	1,253	467
Reserve	9	20	50	42	17
Natl Guard	33	71	165	155	57
DoD					
Active	1,024	1,235	2,358	1,883	1,132
Gd/Res Total	42	91	215	197	74
DoD Total	1,066	1,326	2,573	2,080	1,206

Other Flight Training

This category covers miscellaneous types of flight training, including advanced flight training, flight familiarization, and other flight programs, which were not previously included in undergraduate pilot or navigator training. Load data are displayed in Table VI-9.

Table VI-9.--Training Inputs, Outputs, and Loads, Advanced, Familiarization, and Other Flight Training, FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	239	384	2,910	2,828	380
Reserve	11	24	294	252	37
Natl Guard	38	67	669	633	92
Navy					
Active	36	70	2,586	2,586	70
Air Force					
Active	699	677	3,138	3,166	605
Reserve	3	2	28	26	2
Natl Guard	9	9	128	109	6
DoD					
Active	974	1,131	8,634	8,580	1,055
Ad/Res Total	61	112	1,119	1,020	137
DoD Total	1,035	1,243	9,753	9,600	1,192

The Army includes in this category courses for instructor pilots and specific pilot qualification courses in various aircraft. Most of the courses are short, in the range of two to seven weeks.

The Air Force conducts a separate 22-day flight screening program for candidates for Undergraduate Pilot Training who have not had previous flight familiarization training. The resulting student loads are included in the Flight Familiarization category. Similar training is provided to most Air Force Academy cadets and some Air Force ROTC cadets.

The Navy Other Flight Training workload is comprised mainly of instructor ground school training courses where prospective instructors are taught unique training techniques employed in the training of flight students. These courses are the Flight Instructor Training Course (FITC) and the Academic Instructor Training School (AITS). Jet transition training for designated aviators not qualified in jet aircraft is also included in this category, as are indoctrination flights for U. S. Naval Academy and NROTC midshipmen.

The Air Force Other Flight Training workload is limited largely to instructor courses for pilots and navigators and some specialized courses conducted by the Air Training Command in such fields as electronic warfare. Most Air Force postgraduate flight training is conducted under operational command auspices.

In each of the Services, graduates of undergraduate pilot and undergraduate navigator training receive supplementary training in the specific aircraft they will be flying on operational missions. Emphasis is placed on crew training and performance under conditions that would be encountered in combat. In the Army most of this training is provided as part of normal unit training by the operational unit to which the new pilot is assigned. In the other Services, this additional training is provided by Navy or Marine fleet readiness squadrons, Marine combat crew readiness training squadrons, and Air Force combat crew training squadrons. As an exception, centrally conducted Army advanced flight training loads are included within Other Flight Training loads. However, most such training is classified as "crew and unit training" by the Navy, Marine Corps and Air Force and is not included in the loads of this report.

Determination of Requirements for Rated Officers

Flight Training rates are developed by comparing projections of future requirements for rated officers with projections of the future status of inventories of both reserve and active duty rated officers. Consideration is given to the need to have sufficient active duty aviators on hand, in appropriate grades. Requirements for rated officers include both the numbers needed to man the force in peacetime and the additional increment needed to man and sustain the force when war breaks out. For analytical purposes, aviator requirements are divided into two parts: unit and individuals. Requirements for aviators for each of these categories are computed to meet both peacetime needs and wartime mobilization needs.

Unit requirements represent the number of rated officers needed to carry out operational, training, and management activities for programmed units. Each such authorized position (that is, military space or billet) requires a rated officer as an incumbent in order to carry out the functions of the job, either because the job involves flying duties (i.e., "operational flying" positions as defined for purposes of the Aviation Career Incentive Act of 1974) or requires flying experience. Other positions that may be occupied by rated officers for career broadening or similar purposes, but that do not require rated officer incumbents for accomplishing the duties, are not included. Unit requirements have three subcomponents: force, training, and supervision.

Force requirements are the positions required to man and operate the Services' force aircraft. The number of force positions is a product of established crew ratios, or the number of crews per aircraft, which in turn take into account workload (flying hour) and readiness factors and the amount of mission flying and unit flight training that is necessary.

Training positions include the flyers who are conducting formal flight training.

The supervision component is made up of officer positions entailing actual supervision of flying and flight-related activities and the performance of staff jobs which require the expertise of a rated officer. These positions are continuously scrutinized by the services to assure that rated requirements are valid.

Individual requirements include the transients, students and other individuals needed to make it possible to provide for reasonable manning of positions in units.

Rated Officer Inventory Projections

Projecting rated officer inventories into the future must be based on historical experience, current judgment, and an appraisal of how the officers will react to conditions in the future (for example: pay, morale, state of the civilian economy, civilian airline hiring plans, and family satisfaction with service life). These estimates are projected for at least five years in the future. Comparisons of total force inventories of rated officers are then made against the computed total force requirements, and training rates for the entire five-year period are adjusted. This process is repeated each year so that adjustments can be made in training rates based on changes in requirements and/or updated inventory projections. This continuing process of adjustment is necessary to insure that the correct number of trained rated officers will be available in the future without large and expensive fluctuations in training rates.

Training Rate Adjustments

When a comparison of requirements and inventories discloses a shortage or overage of projected rated officers, training rates are adjusted upward or downward in order to bring the program back into balance. For example, if projected FY 1993 pilot requirements exceed projected inventories by 1,000, an increase in training rates (that is, output or production) of pilots of 200 per year starting in FY 1989 may be appropriate. Inputs into the training program would start in FY 1988 in order to obtain the first increase in desired output in FY 1989. This reevaluation process is repeated at least once each year, with adjustments made as necessary to avoid wide fluctuations in loads.

Determination of Training Loads

The process described above, through continuous updating of the comparison between projected rated officer requirements and inventories, leads to a requirement for phased output from the flight training establishment. The desired annual output, considering the anticipated attrition rates and the planned course lengths, as discussed in the preceding sections on the various types of flight training, establishes the size of the input necessary to achieve the target output. Training loads are then calculated, using these factors, to determine the average number of students to be on hand during the training year. For FY 1988, the currently recommended loads are those displayed previously in this chapter.

VII

PROFESSIONAL DEVELOPMENT EDUCATION

General Description

The purpose of Professional Development Education is to provide training and education to career military personnel to prepare them to perform the increasingly complex tasks that become their responsibilities as they progress in their military careers. Whereas Specialized Skill Training is directed toward specific job skills, Professional Development Education is concerned with broader professional development goals in such subjects as leadership and management, military science, engineering, and medicine. Professional Development Education is conducted at both military and civilian institutions. This category includes senior enlisted leadership training in recognition of the broad professional content of these courses, as opposed to the narrower skill-oriented training typical of most enlisted training programs. However, most of the programs in this category are for professional development of officers.

Training loads for FY 1980-1989 are as shown in Table VII-1.

Table VII-1.--Professional Development Education Training Loads, FY 1980-1989

Service Component	FY 80	FY 82	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
Army									
Active	2,402	2,587	2,797	2,997	3,710	3,410	3,574	3,340	3,344
Reserve	56	62	47	89	76	101	117	111	111
Natl Guard	53	54	52	57	62	66	64	68	69
Navy									
Active	1,582	1,486	1,727	1,847	3,042	2,060	2,289	2,370	2,407
Reserve	10	39	25	37	50	61	63	63	63
Marine Corps									
Active	647	672	696	782	838	847	867	875	880
Reserve	14	18	30	19	27	35	34	34	34
Air Force									
Active	3,191	3,480	3,995	4,234	5,028	3,904	3,895	3,823	3,807
Reserve	44	83	81	68	44	47	46	47	47
Natl Guard	38	42	38	41	41	46	49	47	47
DoD									
Active	7,822	8,225	9,215	9,860	12,618	10,221	10,625	10,408	10,438
Res/Gd Total	215	298	273	311	300	356	373	370	371
DoD Total	8,037	8,523	9,488	10,171	12,918	10,577	10,998	10,778	10,809

The total loads in the table show a considerable disparity among the Services in amounts of Professional Development Education. These disparities are more apparent than real, and are related mainly to somewhat different ways of categorizing Service education/Specialized Skill Training programs.

The first three subcategories of Professional Development Education are officer professional military development programs. These programs are at three levels: career, intermediate, and senior.

Education in the military is fundamental to the development of military officers enabling them to become fully qualified to perform duties of high responsibility in both war and peace. In most non-military professions, growth in ability and knowledge is gained through experience. In the military, opportunities for full practice of the profession are limited to wartime, and even those officers with combat experience have not had the opportunity for thorough exercise of warfare decision skills at their current rank and responsibility. The military school system serves partially to fill this shortfall by educating military officers in the skills and knowledge needed to perform their duties in a variety of locales and situations, both in peacetime and wartime.

To accomodate an increased force structure in the Reserve Components, more professional development training is required for mid-career officers and enlisted personnel in the Reserve and National Guard. The Reserve Components account for 7 percent of career, intermediate, and senior levels of Professional Development Education, and 7 percent of Enlisted Leadership Training in FY 1988.

In addition to the regular courses for active force officers, most schools in this category present nonresident courses and short seminars. Large numbers of Reserve Component officers and other military students are provided instruction through correspondence courses.

Career Officer Professional Schools

The Marine Corps and Air Force conduct career officer professional courses for officers with some experience in operational units. These courses are Service-wide in scope and are, therefore, carried in this report under Professional Development Education. The Army and Navy conduct courses that are at a similar level, but are oriented toward specific skills (e.g., the Navy's Surface Warfare Officers Course) or somewhat broader skills within a specific part of the Service (e.g., the Army's Armor Officer Advanced Course). The Army and Navy courses, because of their specialization, are treated in this report as part of Specialized Skill Training.

The Marine Corps Amphibious Warfare School prepares officers in the grade of captain for duties in battalion or squadron command or on regimental-level staffs. The course length is 39 weeks. The Air Force Squadron Officer School is an 8-week course designed to prepare selected captains, after completion of some active service experience, for command and staff duties appropriate to their grade.

The training load data for FY 1986-1988 associated with these Marine and Air Force courses are displayed in the Table VII-2.

Table VII-2.--Training Inputs, Outputs, and Loads, Career Officer Professional Schools, FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Marine Corps					
Active	131	131	175	175	131
Reserve	7	10	260	260	10
Air Force					
Active	634	632	3,868	3,868	632
Reserve	2	2	10	10	2
Natl Guard	3	4	26	26	4
DoD					
Active	765	763	4,043	4,043	763
Gd/Res Total	12	16	296	296	16
DoD Total	777	779	4,339	4,339	779

Intermediate Service Schools

Each of the Services maintains a Command and Staff College. In addition, the Navy is executive agent for the Armed Forces Staff College, a joint institution sponsored by the Joint Chiefs of Staff with students from all Services. While there are differences in approach and curriculum based on the requirements of the parent Service, each of the courses is designed to prepare officers for command and staff duties in all echelons of their parent Services and in joint or allied commands. A relatively small number of officers from each Service attends one of the Command and Staff Colleges of the other Services; a few attend Allied schools at the same level. Attendance at the Intermediate Service Schools is on a selective basis. The following table lists the Command and Staff Colleges and their respective course lengths.

Table VII-3.--Intermediate Service Schools

Schools	Location	Course Length (Weeks)
Armed Forces Staff College	Norfolk, VA	22
Army Command and General Staff College	Fort Leavenworth, KA	42
College of Naval Command and Staff	Newport, RI	46
Marine Corps Command and Staff College	Quantico, VA	43
Air Command And Staff College	Montgomery, AL	43

Another school categorized as an Intermediate Service School for purposes of this report is the Defense Systems Management College at Fort Belvoir, Virginia. This is a joint school that conducts a primary 20-week course in program management concepts and methods with the major purpose of preparing selected military officers and DoD civilian personnel for assignments in program or project management.

Load data for military personnel attending Intermediate Service Schools is shown in the following table.

Table VII-4. Training Inputs, Outputs, and Loads, Intermediate Service Schools, FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	774	884	2,459	2,459	881
Reserve	33	41	541	539	43
Natl Guard	34	30	213	211	28
Navy					
Active	277	295	3,849	3,851	295
Reserve	39	40	4,030	4,030	40
Marine Corps					
Active	175	162	220	220	166
Reserve	10	10	230	230	10
Air Force					
Active	409	409	603	603	409
Reserve	11	12	124	124	13
Natl Guard	12	13	124	124	13
DoD					
Active	1,635	1,750	7,131	7,133	1,751
Gd/Res Total	139	146	5,262	5,258	147
DoD Total	1,774	1,896	12,393	12,391	1,898

Senior Service Colleges

Each of the Military Departments maintains a Senior Service School, or "War College." In addition, there is the National Defense University, consisting of two joint Senior Service Schools, The National War College and the Industrial College of the Armed Forces, which are attended by students from all four Services. Senior Service College attendance is on a highly selective basis; students are chosen by Service selection boards from among the most promising officers in the lieutenant colonel/colonel, commander/captain grades.

The common purpose of these Senior Service Colleges is to prepare students for senior command and staff positions at the highest levels in the national security establishment and the allied command structure. The unifying focus is the study of national goals and national security policy. Each of the Service colleges, while concentrating on the employment of the parent Service in the defense mission, also includes the study of the employment of the forces of other Services.

All of the colleges integrate the study of economic, scientific, political, sociological, and other factors into the consideration of national security problems. The Industrial College, in its approach to national security problems, emphasizes the use and management of national resources. The length of the principal courses at the Senior Service Colleges is ten months. Most colleges also conduct shorter special-purpose seminar-type courses, some particularly designed for Reserve Component officers. Use of these short courses is greatest in the Navy.

Load data for the Senior Service Colleges are shown in the following table.

Table VII-5.--Training Inputs, Outputs, and Loads, Senior Service Colleges, FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	318	361	1,114	1,114	363
Reserve	25	25	192	192	21
Natl Guard	16	16	134	134	18
Navy					
Active	130	133	1,489	1,502	133
Reserve	19	20	3,361	3,361	20
Marine Corps					
Active	58	53	66	66	53
Reserve	6	6	127	127	6
Air Force					
Active	222	225	288	288	222
Reserve	7	7	93	93	7
Natl Guard	7	7	92	92	7
DoD					
Active	728	772	2,957	2,970	771
Gd/Res Total	80	81	3,999	3,999	79
DoD Total	808	853	6,956	6,969	850

Enlisted Leadership Training

The courses included in this category are designed to provide selected senior enlisted personnel the skills and knowledge needed to assume the responsibilities of the highest noncommissioned officer grades. These courses are the culmination of formal enlisted training and are, for enlisted personnel, analogous to the officer courses discussed in the preceding sections. In addition to such subjects as methods of leadership, human relations, discipline and training, and the administration and employment of military organizations, the senior noncommissioned officers, in these higher-level schools, are given a broader perspective of the role and functions of their Services. Schools, locations and course lengths are shown in Table VII-6.

Table VII-6.--Enlisted Leadership Training Courses

Schools	Location	Course Length (Weeks)
Army: Sergeants Major Academy	Fort Bliss, TX	22
Navy: Senior Enlisted Academy	Newport, R.I.	9
Marine Corps:		
Senior Level (Sgt Maj/ Staff MGy Sgt Senior Course)	Quantico, VA	1
Staff NCO Academy		
(Career Course)	Quantico, VA	6
	Camp Lejeune, NC	6
	El Toro, CA	6
(Advanced Course)	Quantico, VA	2
Air Force: Senior NCO Academy	Gunter AFB, AL	8

Other enlisted leadership training for more junior noncommissioned officers is carried in Specialized Skill Training. This includes command-sponsored NCO academies, for example. This training tends to be more skill related for specific types of specialized leadership responsibilities. The senior enlisted leadership training carried in this chapter is more properly thought of as Professional Development Education in a broader sense. All four Military Services now sponsor Senior Enlisted Leadership Academies. In addition the Air National Guard conducts Professional Military Education courses at McGhee Tyson Air Base, Knoxville, TN. These courses include Leadership School, NCO Academy, Academy of Military Science, and Professional Continuing Education. Army National Guard NCO's are trained in the Reserve Component Noncommissioned Officers Education System (RCNCOES), attending courses at the appropriate level of training at State Military Academies or National Guard Bureau Regional NCO Schools.

Training loads for enlisted leadership training for FY 1986-1988 are shown in Table VII-7.

Table VII-7.--Training Inputs, Outputs, and Loads, Enlisted Leadership Training, FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	190	223	610	602	266
Reserve	7	21	40	39	17
Natl Guard	11	13	40	39	17
Navy					
Active	43	46	265	260	46
Reserve	2	2	10	10	2
Marine Corps					
Active	207	227	1,832	1,682	227
Reserve	12	8	152	152	8
Air Force					
Active	189	191	1,199	1,199	191
Reserve	3	2	15	15	2
Natl Guard	5	5	30	30	5
DoD					
Active	629	687	3,906	3,743	730
Gd/Res Total	40	51	287	285	51
DoD Total	669	738	4,193	4,028	781

Graduate Education Fully Funded, Full Time

The Department of Defense needs military officers with specialized advanced knowledge, at a level attainable only through graduate education, to perform effectively in certain military jobs. The purpose of the graduate education program in each of the Services is to provide graduate-level education in required disciplines to the numbers of officers required to maintain an inventory of officers qualified to fill these jobs. Under the program described in this section, military officers undergo graduate education on a full time, fully funded basis. An active service payback obligation of two years of service for each year of schooling is required of all officers entering the program, up to a maximum set by the Services. (The Funded Legal Education program established by 10 USC 2004 requires an active service commitment of two-for-one.)

The following table displays training load data for these graduate education programs. All participants are members of the Active Forces.

Table VII-8.--Training Inputs, Outputs, and Loads, Graduate Education
Fully Funded, Full Time, FY 1986-1988

Service	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	1,091	1,093	605	605	1,048
Navy					
Active	1,289	1,392	836	742	1,472
Marine Corps					
Active	140	158	91	83	167
Air Force					
Active	1,296	1,418	740	761	1,392
DoD Total	3,816	4,061	2,272	2,191	4,079

Officer graduate students attend either a civilian educational institution or one of the two Service institutions, the Naval Postgraduate School or the Air Force Institute of Technology, depending upon where the required education can best be obtained. Curricula in the two service institutions emphasize military-unique courses, such as in logistics management or intelligence operations, and military applications in all other courses. While these schools are primarily used by the parent Services (including Marine Corps use of the Naval Postgraduate School), they also educate some students from other Services. The following table displays student loads for these two schools.

Table VII-9.--Graduate Education Loads at Service Institutions, FY 1986-1988

	Naval Postgraduate School			Air Force Institute of Technology		
	FY 86 Load	FY 87 Load	FY 88 Load	FY 86 Load	FY 87 Load	FY 88 Load
Army	174	140	138	30	42	40
Navy	1,082	1,174	1,244	5	5	5
Marine Corps	101	107	106	3	3	3
Air Force	78	108	109	1,249	1,386	1,363
Total DoD	1,435	1,529	1,597	1,287	1,436	1,411

Requirements for graduate-educated officers depend upon the number of "validated billets," that is, military positions that have been determined to require an incumbent with graduate-level education in the applicable academic discipline. Each Service has established a system, ordinarily culminating in a board of senior officials in the Service headquarters, which examines the duty prerequisites for each billet nominated for validation and determines if the job does, in fact, require an officer with an advanced degree. Requirements for graduate legal education are determined separately.

Other Full Time Education Programs

In addition to the Professional Development Education programs already described there are a variety of other full time programs tailored to meet the particular needs of the Services. (Health Professions Education programs are discussed in a separate section at the end of this chapter).

Several programs have been designed to permit selected individuals an opportunity to work toward associate, baccalaureate, or advanced degrees. These programs benefit the Services in several important ways: they increase the technical qualifications of the individuals in the program; they improve the general educational levels of Service personnel; and they provide career retention and recruiting incentives to outstanding personnel. In addition, to the extent possible, personnel in advanced education programs are later used to satisfy validated requirements and hence reduce the required student load in graduate education for validated billets.

The degree-completion programs are managed by the individual Military Departments and each has its own selection criteria. However, in general individuals are not selected for a program unless the education will enhance their professional development and be of use to the Military Department. All of the programs require an active Service payback from the individual.

Short-course education provides the Military Services with needed skills in a wide variety of scientific, administrative, and other fields. These programs are selected to train personnel in job-oriented skills that can best be acquired through abbreviated courses. Accounting, traffic management, and aviation safety are examples of skills involved. Some of this included training is conducted in DoD schools, the remainder in civilian institutions.

The following table displays load data for this category.

Table VII-10.--Training Inputs, Outputs, and Loads, Other Full Time Education Programs, FY 1986-1988

Service Component	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army					
Active	732	732	2,152	2,152	496
Navy					
Active	117	124	745	727	129
Reserve	1	1	26	26	1
Marine Corps					
Active	136	136	88	83	131
Air Force					
Active	634	502	6,577	6,576	449
Reserve	24	23	583	583	23
Natl Guard	19	20	394	394	18
DoD					
Active	1,619	1,494	9,562	9,538	1,205
Gd/Res Total	44	44	1,003	1,003	42
DoD Total	1,663	1,538	10,565	10,541	1,247

Health Professions Education

This subcategory is made up of a wide variety of courses for personnel of all health professions -- physicians, dentists, nurses, medical administrators, and so forth. The majority of the courses offered are conducted in military facilities and vary in length from a few days to a full year. Some training is conducted at civilian medical institutions and in the case of the Army, includes some advanced degree programs. The purpose of Health Professionals Education is to expand the skills of military medical personnel and to provide them timely information on the latest techniques in their fields. In this category, the Navy provides long-term training. The Army and Air Force rely on short courses. Educational programs connected with the acquisition of health professionals is carried in this report under Officer Acquisition Training.

The following table shows load data for Health Professions Education.

Table VII-11.--Training Inputs, Outputs, and Loads, Health Professions Education, FY 1986-1988

Service	FY 86 Load	FY 87 Load	FY 88 Input	FY 88 Output	FY 88 Load
Army	346	316	17,355	17,355	321
Navy	204	299	248	230	295
Air Force	439	452	2,145	2,142	454
DoD Total	989	1,067	19,748	19,727	1,070

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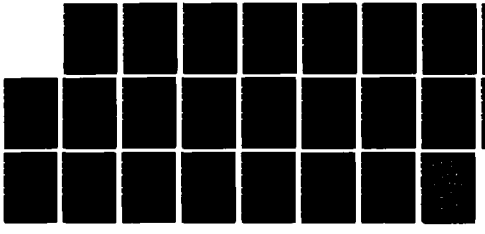

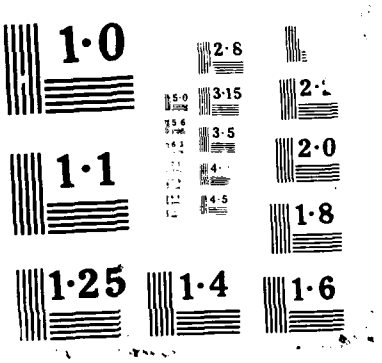
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VIII

TRAINING MANPOWER

General Description

Manpower associated with the individual training mission in the Department of Defense can be divided into two parts: first, the trainees and students being trained, and second, the military and civilian manpower that conducts and supports the training. These two classes of manpower are discussed and explained in this chapter.

Trainees and Students

Manpower undergoing training in the Defense training establishment is defined and quantified in three different ways, each of which serves a somewhat different purpose with regard to manpower accounting and resource allocation.

1. Training Loads. These are the "military training student loads" which are detailed in Chapters III through VII of this report -- the average number of military trainees, students, and cadets of each Service and component in training during a given fiscal year, which is subject to annual congressional authorization. Training loads include all military manpower of a given Service or component who are undergoing individual training, regardless of whether the training is conducted by the parent Service, one of the other Services, a DoD school, or by an agency or institution outside the Department of Defense, such as a civilian college or university. Training loads also include all military personnel in training regardless of their assignment status. Some trainees and students are assigned to the training activity; others are attending training in a temporary duty (TDY) or temporary additional duty (TAD) status while remaining assigned to their parent units; still others are attending while in transit from one permanent assignment to another.

Since training loads are an annual average and most courses are much shorter than a year in length, the actual number of students and trainees who enter training, and the number who graduate, is considerably greater than the training load. For example, the total programmed training load for Recruit Training in FY 1988 is about 52,000, yet about 347,000 persons are to enter Recruit Training and about 309,000 are to graduate.

2. Training Workloads. The total number of trainees and students undergoing training within DoD includes some trainees and students of foreign nations, DoD civilian employees, and members of other departments and agencies of the U.S. Government, notably the Coast Guard. In addition, many U.S. military students and trainees are trained by a Service other

than their own. Consequently, the average number of students being trained by a given Service, or its training workload, usually differs from its training load. For example, the Marine Corps has a programmed Flight Training load of 509 in FY 1988; however, since the training is conducted by other Services, its Flight Training workload is zero. On the other hand, because the Navy trains many personnel from other Services and Coast Guard and foreign students as well as most of its own students, the Navy's Specialized Skill Training workload is higher than its training load.

Since training workload, in conjunction with other applicable considerations, is the major determinant of the resources (manpower, funds, materiel and facilities) required to conduct training, it, rather than training load, is appropriately used in considering the allocation of resources to a Service or a training activity. Table VIII-1 displays the programmed training workloads for each of the Services in FY 1988.

TABLE VIII-1.--Training Workloads, FY 1988 a/
(Thousands)

Category	Army	Navy	Marine Corps	Air Force	DoD
Recruit	19.4	16.7	9.3	7.8	53.2
Officer Acquisition	6.8	5.7	.5	5.4	18.5
Specialized Skill	66.2	55.8	8.6	25.6	156.3
Flight	2.0	2.8	0	3.5	8.3
Professional Development Education	1.7	3.9	.5	3.4	9.5
One-Station Unit Training	15.4	-	-	-	15.4
Total	111.7	84.9	19.0	45.7	261.2

a/May not add to totals due to rounding.

3. Students, Trainees, and Cadets. In the Individuals accounts of the Defense Manpower Requirements Report, military manpower is included for each Service as "Trainees and Students" and (except for the Marine Corps) "Cadets". Conceptually, this manpower represents the number of military trainees, students, cadets and midshipmen programmed to be assigned (PCS as opposed to TDY/TAD) for training on the last day of a given fiscal year. Student, trainee, and cadet manpower is similar to training load in that both represent military members of the reporting Service in training status. Nevertheless, there are substantial differences in the way the amount of manpower in these two manpower aggregations is calculated, with the result that the totals are seldom the same. The major reasons for these differences are:

- Training loads are manyears in training status, as has been mentioned, whereas trainees, students, and cadets are end strengths, or

numbers in training on the last day of the fiscal year. Trainee, student and cadet numbers are thus affected by the seasonality of enlistment patterns, as described in Chapter III, while the element of seasonality is evened out in training loads.

- Training loads [illegible] attending training in a temporary duty (TDY) [illegible] attending en route training in a PCS status. In the Defense Manpower Requirements Report TDY and TAD students are carried in the categories of their parent units.

Training loads are a more accurate measure of the amount of training that is needed to meet military requirements than are the categorizations "trainees," "students," and "cadets."

Manpower in Support of Training

Military and civilian manpower is required to accomplish the individual training mission. This manpower conducts and supports instruction, operates training bases and facilities, maintains training equipment, produces training aids, provides personal and community services to students, trainees, and other military members, plans and manages training, and performs all the other tasks necessary to conduct and support individual training conducted in training institutions.

ROTC students are not military members in an active duty status and are not included in military manpower training loads. However, ROTC Basic Camp loads are included in the Army Recruit training loads. To be consistent with this treatment of ROTC students, manpower supporting ROTC programs is not included in Tables VIII-2 through VIII-5.

The following tables summarize manpower in support of training by the general functions, Conduct of Individual Training, Training Base Operating Support, and Management Headquarters. Conduct of Individual Training includes the following types of manpower: instructors, instructional support, school/training center staffs, student supervisors and direct training support such as training aids and literature, audiovisual resources, and instructional systems development.

TABLE VIII-[illegible] Manpower in Support of Training,
Conduct of Individual Training Function
(End Strengths, Thousands)

	FY 86		FY 87		FY88	
	Military	Civilian	Military	Civilian	Military	Civilian
[illegible]	40.3	[illegible]	[illegible]	13.1	40.3	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	3.4	28.7	3.4
Marine Corps	[illegible]	[illegible]	[illegible]	0.3	9.0	0.3
Air Force	[illegible]	[illegible]	11.4	5.2	19.7	5.2
DoD Total	[illegible]	[illegible]	[illegible]	22.0	97.6	21.7

TABLE VIII-3.--DoD Manpower in Support of Training, Base Operating Support Function
(End Strengths, Thousands)

	FY 86		FY 87		FY 88	
	Military	Civilian	Military	Civilian	Military	Civilian
Army	10.0	23.6	7.9	22.4	8.7	22.2
Navy	7.3	7.0	6.9	7.1	6.8	7.1
Marine Corps	3.0	2.1	3.1	2.2	3.1	2.2
Air Force	11.0	9.7	10.7	9.0	10.2	9.0
DoD Total	31.3	42.4	28.6	40.7	28.8	40.5

TABLE VIII-4.--DoD Manpower in Support of Training, Management Headquarters Function
(End Strengths, Thousands)

	FY 86		FY 87		FY 88	
	Military	Civilian	Military	Civilian	Military	Civilian
Army	0.5	0.8	0.6	0.8	0.6	0.8
Navy	0.3	0.5	0.3	0.2	0.3	0.2
Marine Corps	*	-	*	-	*	-
Air Force	0.9	0.7	0.9	0.5	0.9	0.5
DoD Total	1.7	1.7	1.7	1.5	1.7	1.5

*Less than 50.

TABLE VIII-5.--DoD Manpower in Support of Training, All Functions
(End Strengths, Thousands)

	FY 86		FY 87		FY 88	
	Military	Civilian	Military	Civilian	Military	Civilian
Army	51.5	36.3	50.0	36.3	49.5	35.8
Navy	37.1	10.6	36.9	10.7	35.8	10.7
Marine Corps	11.9	2.4	12.1	2.5	12.1	2.5
Air Force	34.0	15.1	32.9	14.7	30.8	14.8
DoD Total	134.5	64.7	132.0	64.3	128.1	63.8

The Service estimates of training attributable manpower include some staff and support manpower that do not contribute to the production of student output and loads but are reported as training resources in the Five Year Defense Program (FYDP) because they belong to organizations with a primary mission of training. The majority of the non-training attributable manpower is for Base Operating Support (BOS) given to non-training tenant activities at training installations.

Table VIII-6 shows changes in total military and civilian manpower in support of training between FY 1980 and FY 1988.

TABLE VIII-6.--Trends, Manpower in Support of Training, DoD Total, By General Function, FY 1980-1988 a/
(End Strengths, Thousands)

	FY 80			FY 83			FY 88			Percent Change Total Manpower	
	Mil	Civ	TOT	Mil	Civ	TOT	Mil	Civ	TOT	FY 80-88	FY 83-88
Conduct of Individual Training	100	22	122	104	19	123	98	22	119	-2.2%	-2.8%
Base Operating Support	32	41	73	32	42	74	29	41	69	-5.1%	-6.7%
Management Headquarters	2	2	4	2	2	4	2	2	3	-10.4%	-13.1%
TOTAL	133	65	199	138	63	201	128	64	192	-17.7%	-22.6%

a/ May not add to totals due to rounding

As Table VIII-6 shows, the total military and civilian manpower in support of training has decreased 22.6 percent between FY 1983 and 1988. The decrease occurred in all areas supporting training.

As shown in Tables VIII-7 and VIII-8, training workloads will be about 7.5 percent higher in FY 1988 than in FY 1983; considered with the significant decrease in the level of total manpower in support of training, this implies an increase in manpower productivity.

TABLE VIII-7.--Trends, Training Workloads, FY 1980-1988 a/
(Thousands)

	FY 80	FY 83	FY 88	Percent Change FY 80-88	Percent Change FY 83-88
Army	105	102	112	+ 6.4%	+ 9.6%
Navy	70	76	85	+20.5%	+11.3%
Marine Corps	18	18	19	+ 8.3%	+ 8.2%
Air Force	46	47	46	- .9%	- 3.3%
DoD Total	239	243	261	+ 9.3%	+ 7.5%

a/ May not add to totals due to rounding.

TABLE VIII-8.--Trends, Training Manpower and Training Workloads, FY 1980-1988
(Thousands)

	FY 80	FY 83	FY 88	Percent Change FY 80-88	Percent Change FY 83-88
Manpower in Support of Training	199	201	192	-17.7%	-22.6%
Training Workloads	239	243	261	+9.3%	+7.5%

Training Manpower Detailed by Service and Type of Training

Table VIII-9 shows the manpower required to support FY 1988 training workloads by Service and training activity.

As was noted early in this chapter, training workloads, in conjunction with other factors, are the determinants of the resources required to conduct training. The workload/resource relationship is not a simple one, but depends upon the nature of training and training support involved. For example, Flight Training normally requires a great deal of support manpower for aircraft maintenance; weapons training requires close instructor supervision for safety considerations.

TABLE VIII-9.--Training Manpower by Service and Type of Training, FY 1988
(Thousands)

Training Activity	Army		Navy		Marine Corps		Air Force		DoD	
	Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ	Mil	Civ
Recruit	4.2	0.1	1.6	.0	2.4	.0	0.7	.0	8.8	0.1
Officer Acquisition	0.8	0.9	0.9	0.9	0.3	.0	1.2	0.7	3.2	2.5
Specialized Skill	16.6	5.0	18.9	0.8	5.6	0.2	8.7	2.3	49.8	8.4
Flight	1.4	0.4	6.0	0.6	0.3	0.0	5.9	0.9	13.6	1.9
Professional Development	0.7	0.8	0.5	0.9	0.3	0.1	1.4	0.5	2.6	2.3
One-Station Unit Training	7.4	0.7	-	-	-	-	-	-	7.4	0.7
Medical Training	1.8	0.6	0.6	0.0	-	-	0.7	0.1	3.1	0.7
Direct Training Support	7.4	4.2	0.2	0.1	0.1	*	1.5	2.6	9.1	6.9
Base Operating Support	8.7	22.2	6.8	7.1	3.1	2.2	10.1	7.3	28.7	36.8
Management Headquarters	0.6	0.8	0.3	0.2	*	-	0.9	0.5	1.7	1.5
TOTAL[a/]	49.5	35.3	35.8	10.7	12.1	2.5	30.6	14.8	128.1	63.3

a/ The Service estimates of training attributable manpower include some staff and support manpower that does not contribute directly to the production of student output and loads but are reported as training resources in the Five Year Defense Program (FYDP) because they belong to larger organizations with a primary training mission.

*Less than 50.

Manpower data in the six categories of training (i.e., Recruit through One-Station Unit Training) includes instructors, school/ training center staffs and student supervisors. Direct training support includes such tasks as training aids and literature, audiovisual resources, and instructional systems development.

The Services have estimated for FY 1988 how much of the manpower reported in Program 8 of the FYDP is not attributable to individual training and how much non-Program 8 manpower supports individual training. Within Program 8, the Army reported that 8,895 military and 13,059 civilian personnel who support training-related activities other than individual, institutional training could be subtracted from their totals in Table VIII-9 to provide a more representative estimate of their manpower dedicated to accomplishing their FY 1988 workload. The Navy reported adjustments that would subtract 52 military and 8 civilians from their manpower attributable to individual training. The Marine Corps reported adjustments that would add 1,327 military and subtract 252 civilians from their totals. The Air Force reported adjustments that would subtract 10,253 military and 7,100 civilians from their totals.

IX

TRAINING MANAGEMENT AND FUNDING

General Description

Chapters III through VII of this report describe and explain the military training student loads requested to be authorized for each military component. These student loads represent patterns and levels of training effort which require manpower and other resources. The purpose of this chapter is to describe and explain the resources (other than manpower, which is discussed in Chapter VIII), funding and costs associated with the conduct of individual training.

In considering training resources, it is important to distinguish between the training loads required by a Service but conducted in part outside the Service, and the workloads representing training conducted by the Service. As discussed in the previous chapter, the workloads, which represent training conducted by a Service, are the basis for resource requirements (manpower, materiel, facilities, and funds) needed to conduct and support the training that the Service executes.

Management of Individual Training

Detailed management of individual training is carried out by the four Military Services. Each of the Services, except the Marine Corps, has a training commander immediately subordinate to the Service chief who is responsible for most of the individual training conducted within that Service. Some training is managed directly by the Service headquarters. However, the most prevalent pattern of control is through a training command headquarters that manages most Service military schools, training centers, and other training facilities.

Staff Responsibilities

Within the Office of the Secretary of Defense, staff responsibility for individual training and education policies rests with the Assistant Secretary of Defense (Force Management and Personnel), with a strong influence over the allocation and use of resources being exercised by the Assistant Secretary of Defense (Comptroller). The staffs of these two offices work closely together in the staff supervision of DoD individual training and education. Other OSD offices, such as Health Affairs, and Research and Engineering, participate as appropriate. The OSD role is generally one of policy formulation, allocation of resources, overview of Service training programs, and coordination among the Services.

Within each Service headquarters, a principal staff officer has responsibility for individual training. Other staff members may have primary responsibility for certain types of training, as, for example, a Service Surgeon General for professional medical training. Other staff members have collateral responsibilities for the allocation of manpower and funds to the training function.

Primary responsibility on the Army staff for individual training rests with the Deputy Chief of Staff for Operations and Plans and his subordinate, the Director of Training. Within the Navy, the principal staff officer is the Deputy Chief of Naval Operations for Manpower, Personnel, and Training. The Marine Corps manages training through the Deputy Chief of Staff for Training. Commanders of the separate major subordinate training activities report directly to the Commandant of the Marine Corps, dealing with the headquarters training staff. Within the Air Force, the Director of Personnel Programs, under the Deputy Chief of Staff for Personnel, has staff responsibility for individual training.

Training Commands

The Army, Navy, and Air Force each has a command headquarters that manages most of the individual training conducted by that Service.

The Army's principal training command headquarters is Headquarters, Training and Doctrine Command (TRADOC), located at Fort Monroe, Virginia. TRADOC's control is exercised through training installation and school commanders throughout the United States.

The Chief of Naval Education and Training, headquartered at Pensacola, Florida, exercises control, through subordinate functional commanders, of education and training conducted in training centers, schools, and programs throughout the Navy.

For the Air Force, Headquarters, Air Training Command, at Randolph Air Force Base, Texas, directly controls individual training centers and units.

The Service-wide training commands are not responsible for all individual training and education conducted. As already noted, the Surgeons General are responsible for [illegible] health professional and medical technical training. Other examples include the Service Academies, which are under the direct supervision of the respective Service Chiefs.

The Service Training Command Chiefs and the Marine Corps Deputy Chief of Staff for Training are also the senior members of the Inter-service Training Review Organization (ITRO). ITRO was formed in 1972 to facilitate cooperative training efforts among the Services. The committees and working groups of the Organization perform the detailed analysis which becomes the basis for decisions on the feasibility of consolidation of training courses or other cooperative arrangements. A listing of major joint training efforts is provided in Appendix B.

Training Facilities

Appendix C lists the principal individual training facilities of the four Services for each of the major categories of training. Projected average training workloads and training support manpower for FY 1988 are also shown for each facility listed.

Training Funding and Costs

The training costs addressed in this section include funding in the President's Budget for Fiscal Year 1988 requested for individual military training and education. Depreciation costs of training facilities and equipment are not included, although training investment costs estimated for FY 1988, such as procurement and construction costs, are included. The report uses the data in the DoD's Five Year Defense Program (FYDP) as the basis for all estimates of the manpower and funds devoted to training and education.

The costs in this chapter include funding for military pay and allowances for both PCS and TDY/TAD students, pay and allowances of military and civilian personnel in support of training, training-related PCS costs, base operating costs in support of training, training-related operations and maintenance costs (including civilian support personnel pay and allowances), training investment costs for construction and procurement, and overhead costs for training administration and command. Certain costs for activities that are organic parts of training organizations but that support non-training missions (such as Base Operating Support for non-training activities on training bases) are also included in the costs shown in the tables in this chapter to provide comparability with the Five Year Defense Program and the President's Budget.

For a given Service, the requirement for funding for training arises from two factors: first, the need to fund the pay and allowances of its own military training student loads, regardless of where or by whom the students are trained; and, second, the need to provide for the level of individual training and education effort necessary to meet the Service's commitments to accomplish training for its own and other students.

For comparability, the funding requests associated with ROTC and other non-load training programs are deleted from the following tables. Hence the tables report FY 1988 funding estimates related to the requested FY 1988 training loads.

Special caution should be exercised in using these costs for comparisons among Services. Differences in missions among the Services, differing operating and training conditions, and differences in the mix of Service training programs, degrade the soundness of comparisons based on aggregated data such as these.

Table IX-1 shows funding of individual training for the Army for FY 1986 through FY 1988.

TABLE IX-1.--Funding of Individual Training a/
for the Army by Type of Training and Fiscal Year
($ Millions)

	FY 86	FY 87	FY 88
Recruit	$ 369.7	$ 344.1	$ 323.6
Officer Acquisition	121.7	119.8	122.9
Specialized Skill	1,555.8	1,661.9	1,627.0
Flight	461.6	358.3	519.2
Professional Development Education	211.6	221.1	231.3
One-Station Unit Training	412.0	424.8	423.4
Medical Training	298.6	318.5	324.7
ETS and Direct Training Support	2,163.3	2,308.5	2,328.9
Management Headquarters	65.1	65.1	65.9
PCS Cost for Training	249.9	309.5	336.8
TDY Cost for Training	858.1	946.0	960.2
Reserve Component Pay & Allowances	668.5	648.7	695.6
Total	$7,435.9	$7,726.4	$7,959.5

a/May not add to totals due to rounding.

Funding for individual training is shown each year in Program 8 of FYDP. Some exceptions should be noted when estimating how much of budget is dedicated to individual training. An amount of funding related to individual training appears in other programs of the FYDP. In addition a portion of the resources under Program 8 are not directly related to individual training.

The Services sometimes include in their individual training costs certain Program 8 funds which support other training and activities in addition to individual, institutional training. These costs are related to audiovisual support, training developments, base operations, real-property maintenance, and headquarters management type activities.

Under Program 8, the Training and Doctrine Command (TRADOC) funds Army-wide requirements for audiovisual and visually based instructional materiels used for training individuals or units of the Army. Training Development activities, under TRADOC, produce resident and non-resident training programs and materiels to meet the needs of the Army in the field as well as individual training at the Training Centers and Schools. The management of HQ, TRADOC is funded by Program 8 as is the real-property maintenance (RPMA) and base operations (BASOPS) of all those posts designated as TRADOC installations. Although TRADOC installations may have tenants from other major commands, the RPMA and BASOPS are funded in Program 8. These Program 8 costs ($1.08 billion FY 1987) should be excluded to provide a more representative estimate of funding which is specifically dedicated to accomplishing FY 1988 individual training. There are also non-program 8 costs that support individual training which should be added. The Army reported $5.3 million in this category for FY 1988. Adjusting the Army funding by these two types of costs yields an Army adjusted total of $6.88 billion.

Table IX-2 shows Navy funding for individual training for FY 1986 through FY 1988.

Table IX-2.--Funding of Individual Training for the Navy by Type of Training and Fiscal Year
($ Millions)

	FY 86	FY 87	FY 88
Recruit	$ 514.3	$ 518.9	$ 499.5
Officer Acquisition	163.7	184.4	191.1
Specialized Skill	1,885.0	1,864.6	1,733.8
Flight	823.9	773.5	1,073.5
Professional Development Education	150.7	157.0	161.8
Medical Training	126.5	159.9	177.5
BOS and Direct Training Support	1,000.2	1,015.5	1,073.0
Management Headquarters	28.3	26.5	27.3
PCS Cost for Training	126.5	126.3	126.7
TDY Cost for Training	40.2	39.7	42.8
Reserve Component Pay & Allowances	72.3	62.1	71.5
Total	$4,931.7	$4,928.4	$5,178.6

For FY 1988 the Navy reported $14.8 million in adjustments to the Program 8 costs shown in Table IX-2. This adjustment would result in a total of $5,163.8 million for the Navy. The Marine Corps funding for individual training for FY 1986 through FY 1988 is shown in Table IX-3.

Table IX-3.--Funding of Individual Training
for the Marine Corps by Type of Training and Fiscal Year
($ Millions)

	FY 86	FY 87	FY 88
Recruit	$ 238.7	$ 244.0	$ 249.1
Officer Acquisition	21.1	22.7	22.4
Specialized Skill	431.9	463.1	519.3
Flight	50.7	41.2	40.1
Professional Development Education	45.8	49.3	49.7
BOS and Direct Training Support	212.5	236.3	244.5
Management Headquarters	0.4	0.5	0.5
PCS Cost for Training	94.5	96.6	98.6
TDY Cost for Training	0.9	0.9	0.9
Reserve Component Pay & Allowances	56.5	48.8	47.4
Total	$1,153.0	$1,203.3	$1,272.3

The Marine Corps reported an adjustment to Program 8 costs of $19.8 million which results in a total cost of $1,252.5 million.

The Air Force individual training costs for FY 1986 through FY 1988 are shown in Table IX-4.

TABLE IX-4.--Funding of Individual Training
for the Air Force by Type of Training and Fiscal Year
($ Millions)

	FY 86	FY 87	FY 88
Recruit	$ 223.1	$ 225.1	$ 215.4
Officer Acquisition	172.8	180.8	163.9
Specialized Skill	808.4	913.5	906.6
Flight	905.3	726.3	692.0
Professional Development Education	244.4	231.6	228.0
Medical Training	182.5	195.7	202.1
BOS and Direct Training Support	1,003.1	1,030.0	1,053.4
Management Headquarters	56.8	58.5	58.1
PCS Cost for Training	90.4	83.0	82.5
TDY Cost for Training	349.9	348.8	317.5
Reserve Component Allowances	140.4	130.1	134.5
Total	$4,178.1	$4,123.4	$4,054.0

The Air Force reported an adjustment to Program 8 costs of $498.8 million. This would reduce the total costs for FY 1988 to $3,555.2 million.

Table IX-5 shows funding of individual training by Service and type of training for FY 1988.

Table IX-5.--Funding of Individual Training a/
by Service and Type of Training, FY 1988
($ Millions)

	Army	Navy	USMC	Air Force	DoD
Recruit	$ 323.6	$ 499.5	$ 249.1	$ 215.4	$1,287.6
Officer Acquisition	122.9	191.1	22.4	163.9	500.4
Specialized Skill	1,627.0	1,733.8	519.3	906.6	4,786.7
Flight	519.2	1,073.5	40.1	692.0	2,324.9
Professional Development Education	231.3	161.8	49.7	228.0	670.8
One-Station Unit Training	423.4	-	-	-	423.4
Medical Training	324.7	177.5	-	202.1	704.3
BOS and Direct Training Support	2,328.9	1,073.0	244.5	1,053.4	4,699.8
Management Headquarters	65.9	27.3	0.5	58.1	151.7
PCS Cost for Training	336.8	126.7	98.6	82.5	644.6
TDY Cost for Training	960.2	42.8	0.9	317.5	1,321.4
Reserve Component Pay & Allowances	695.6	71.5	47.4	134.5	949.0
Total	$7,959.5	$5,178.6	$1,272.3	$4,054.0	$18,464.6

a/ May not add to totals due to rounding.

Student pay and allowance totals for a Service's requested military student training load have been added to pay and allowances for the staff and support manpower for each Service's workload. This can produce significant distortions in the use of these aggregates for assessing training efficiency (e.g., in the Marine Corps, where significant loads are trained by other Services).

Appendix D shows a distribution of funds in the table above by appropriation.

Table IX-5 includes substantial segments of cost which are not normally sensitive to significant shifts (say up to fifteen percent) in training load. These include certain command, base, facility, and equipment costs. These "fixed" costs need to be considered in program and budget adjustments because, within a reasonable range of output, they remain approximately the same and do not vary as the training load varies. They change, instead, with decisions to change the manner of accomplishing training, most often through training investment decisions or base realignments.

There are often substantial year-to-year fluctuations in funding for fixed costs. These costs are termed "fixed", not because they do not change from year to year, but because their changes characteristically are not "variable" with changes in workloads from period to period. Funding of these costs reflects significant increases, however, for years in which there are major procurements of, for example, simulators, aircraft, or construction in support of training.

Thus, the proportion of total funding requested to support training differs significantly among the Services and among categories of training; the proportion in the short run, however, is seldom less than one-third of total cost. This has important implications for the extent of funding adjustments appropriate to changes in the level of activity or size of a training program. Other things equal, if training funds are to be adequate for the needs of a reduced program, they must be reduced by a smaller proportion than the program loads in order to account for fixed costs. By the same token, program increases, within reasonable capacity limits, may not require a proportional increase in total program funding.

Training costs are affected by inflation, both because of price rises for goods and services and because of the pay of the military and civilian personnel involved as students, instructors, and support. Some training program costs are strongly affected, in addition, by energy cost increases, especially in flight training.

APPENDIX A

DETERMINING TRAINING REQUIREMENTS

Discussions of the determination of training requirements in this report reflect a generally uniform approach. The following overview of the methodology for assessing and calculating training requirements is provided as a framework for understanding this approach. As noted, details in calculation may differ to some extent among the Services and among the training categories.

Requirements

All training is accomplished to satisfy the need for personnel with certain types and levels of skills to man the approved or projected force. The Services, over the years, have developed detailed, systematic methods of determining the manpower needed to man and support the forces. The Defense Manpower Requirements Report discusses this process. From these force requirements for manpower, the need for trained personnel with specific skills can then be derived. For example, a given force structure establishes the number of trained enlisted personnel needed. The number of authorized positions within that force structure for radar technicians establishes the basic requirement for trained personnel with that skill. This process is reiterated on a phased basis for all skills and skill levels for each Service, for both officer and enlisted skills. The total of all personnel in all skills needed to perform all the jobs in the force at a point in time represents the total requirement for trained manpower projected for that date.

Inventory Projections

The requirements identified through this process must be measured against the available assets, in terms of trained personnel on hand in each skill and skill level. From this asset base, estimates are made of how many trained personnel will be available at various points of time in the future. These estimates take into account probable rates of change to the current inventory -- through reenlistment, promotion, discharge, death, retirement, or other causes. These estimates are based on the best historical information available, tempered by judgment of how in the future personnel policies, the state of the economy, behavioral patterns, and other factors, many of them difficult to predict, will affect the probabilities that a trained individual will remain in the Service. A comparison of skill requirements and skill inventory projections, over time, establishes the extent of shortage or surplus likely to exist in each skill area by month and year. Adjusting the inventory may entail retraining personnel who are in surplus skills, but to a much greater degree, adjustment is likely to require the training of new accessions at entry level in shortage skill areas. The process

places a demand on the personnel management and training establishments continually to analyze information about attrition as it occurs, by skill and skill level, in order to produce the right number of trained personnel with the proper skills needed to restore and maintain the balance of the skill inventory. The workload thus placed on the training establishment is detailed by graduates needed from courses of various lengths and is measured in terms of average student load, or "training load."

Average Training Loads

Resources (manpower, money, and materiel) needed for any particular category of training vary with the number of students undergoing training at any given time. Facilities must be constructed and maintained to accommodate these students in training. The training establishment must maintain a sufficient staff of qualified instructors to conduct instruction for the "load" of students. Students and Trainees, as described in the "Individuals" chapter of the Defense Manpower Requirements Report, must be programmed to account for the fact that these personnel are in formal school training and are not available for duty with operational units. All of these personnel must be paid, housed, and supported. The basis for establishing these resource requirements is the "average training load."

The aggregate training load of courses of instruction within a given training category or sub-category for a given period is computed in accordance with the following formula, except as noted:

$$L = \frac{\sum_{i=1}^{n} \frac{E_i + G_i}{2} t_i}{Y}$$

where L is Average Training Load

i is a class (1,2,....) scheduled for a training course within the training category under consideration,

E is number of expected entrants to scheduled class i,

G is number of expected graduates from scheduled class i,

t_i is the calendar length of the syllabus of class i, and

Y is the length of a calendar year expressed in the same units as t (1 year = 12 months = 52 weeks = 365 days).

Fractions of carryover classes conducted during the year are included as though they were separate classes. However, individuals remaining in class at the end of a period are not counted as graduates, nor are individuals already in a class at the beginning of a period counted as entrants except for purposes of computing training loads for these fractions of courses.

The training load for a category or sub-category of training (e.g., Specialized Skill Training or Functional Training within that category) is the sum of the loads computed for all classes of courses within the category or sub-category.

This method of computation implies "straight-line" attrition, under an assumption that net class attrition occurs at a constant rate during a course. In the relatively few cases when attrition patterns experienced characteristically produce a significantly different distribution of attrition, the more appropriate attrition pattern is used in lieu of the term $\frac{E + G}{2}$.

Since attrition varies for different training programs and is not always spread uniformly throughout the length of a course of training, determining training loads becomes a complex problem in estimation. This process of estimation involves two related factors.

First, across the spectrum of training programs that are within the scope of this report, attrition varies from nearly zero to as high as 25 to 30 percent. Most officer Professional Development Education programs have practically no attrition. For FY 1988, the Services estimate that about 8 percent of new recruits, on a DoD average basis, will not complete Recruit Training because they will be found, in the course of undergoing training, not to have the mental or physical qualifications, or the motivation, for military life. Attrition rates in Specialized Skill Training vary widely, with the longer and more demanding courses tending to have higher losses. Pilot training is near the top of the scale in attrition; the higher rate of losses is based on lack of aptitude or motivation for flying, accidents, and similar causes which are intensified in this type of training. While historical data provide a basis for projecting attrition rates for all types of training, there is a considerable possibility for error based on variance in such factors as student quality and motivation.

A second necessary step in evaluating the effect of attrition is to estimate the phasing of attrition for each training program. In some courses, attrition tends to be higher in the early stages of a course when the inept and those lacking motivation are discovered. In other courses, the bulk of attrition may occur toward the end of the course. The patterns of losses vary widely among types of training and, to the detriment of precise planning, over time. The complexities of the

attrition variable make it necessary for the Services to use computer simulations in their training load calculations which take into account the rates and time-phasing of attrition.

An additional variation is introduced into the conceptual process of forecasting requirements and planning training loads as described above by the seasonal and cyclical nature of new accessions to the Services. Inputs to many of the more stable training programs -- Professional Development Education, Flight Training, the Service Academies, and the most advanced portions of Specialized Skill Training -- are readily predictable. Inputs to the training programs which are dependent on new accessions, Recruit Training and Initial Skill Training for graduates of Recruit Training, are considerably more volatile. The volume of inputs to these types of training depends on such intangibles as job opportunities in the civilian economy and the decisions of young people to enlist, delay enlisting, or not enlist. Moreover, enlistments are seasonal in nature, following a long-term pattern of "good" and "bad" recruiting months, whereas phased requirements may move independently of these seasonal patterns. As a result, training loads for the initial active duty training programs are generally based on a compromise involving the timing of predicted enlistments and the capacity of the training base as well as when the new personnel are needed to fill vacancies in the job structure. Most of the courses in these programs are relatively short, and program adjustments can readily be made.

APPENDIX B

SELECTED MAJOR COURSES/SKILL AREAS TRAINED IN OTHER SERVICES

Sponsoring Service	Major Interservice Course/ Skill Areas	Other Participating Services
Army	Construction Equipment Operator	Marine Corps Air Force
Army	Airborne	Navy Marine Corps Air Force
Army	Artillery	Marine Corps
Army	Armor	Marine Corps
Army	Explosive Ordnance Disposal	Navy Air Force Marine Corps
Army	Joint Tactical Communications Systems (TRI-TAC)	Navy Air Force Marine Corps
Army	Stinger/Redeye Missile	Navy Air Force Marine Corps
Army	Satellite Communication Fundamentals	Navy Air Force Marine Corps
Army	Tracked Vehicle Repair	Marine Corps Air Force
Army	Correctional Specialist	Navy
Army	Postal Operations	Navy Air Force Marine Corps
Army	Combat Casualty Care	Navy Air Force
Army	Biomedical Equipment Specialist (Basic and Advanced)	Navy Coast Guard
Army	Behavioral Science Specialist	Air Force Marine Corps

Sponsoring Service	Major Interservice Course/ Skill Areas	Other Participating Services
Army	Medical Laboratory Specialist (Basic)	Navy Coast Guard
Army	Psychiatric Specialist	Navy
Army	Veterinary Specialist (Basic)	Air Force Marine Corps
Army	Laser Microwave Hazards	Navy Air Force
Army	Tropical Medicine	Navy Air Force
Army	Allergy/Clinical Immunology Specialist	Air Force
Army	Respiratory Specialist	Navy
Army	Occupational Therapy Specialist	Air Force
Army	Advanced Digital Theory	Navy
Navy	Aviation Maintenance	Marine Corps
Navy	Flight Training	Marine Corps Coast Guard
Navy	Cryptologic Courses	Army Marine Corps Air Force
Navy	Diving	Army Marine Corps Air Force Coast Guard
Navy	Musician	Army Marine Corps
Navy	Explosive Ordnance Disposal	Army Marine Corps Air Force
Navy	Cryptographic Maintenance	Marine Corps Air Force Coast Guard
Navy	Teletype Maintenance	Marine Corps

Sponsoring Service	Major Interservice Course/ Skill Areas	Other Participating Services
Navy	Joint and Combined Planning and Operation	Army Marine Corps Air Force Coast Guard
Navy	Military Justice	Marine Corps Coast Guard
Navy	Shipboard Firefighting	Marine Corps Coast Guard
Navy	Corrosion Control	Coast Guard
Navy	Damage Control	Coast Guard
Navy	Supply Support	Marine Corps
Marine Corps	Computer Systems, Programming (IBM 360)	Army Air Force Navy
Air Force	Navigator Training	Navy Marine Corps
Air Force	Tempest (Cryptologic Courses)	Army Navy Marine Corps
Air Force	Cryptologic Equipment Maintenance	Army Navy Marine Corps
Air Force	Precision Measurement Training	Army Marine Corps
Air Force	Aircraft Pneudraulic Repair	Army
Air Force	Weather Training	Army Navy Marine Corps
Air Force	Military Dog Handler	Army Navy Marine Corps
Air Force	Law Enforcement	Navy Marine Corps

Sponsoring Service	Major Interservice Course/ Skill Areas	Other Participating Services
Air Force	Fire Control Specialist	Army Marine Corps
Air Force	Nondestruct Inspection	Army Navy Marine Corps
Air Force	Defense Sensor Interpretation and Application Training	Army Navy Marine Corps
Air Force	Air Intelligence Training	Army Navy Marine Corps
Air Force	Lineman Training	Army Marine Corps
Air Force	Professional Comptroller	Army Navy Marine Corps
Air Force	Radio Communications Analysis	Army Navy Marine Corps
Air Force	Voice Processing	Army Navy Marine Corps
Air Force	Cryptoanalysis	Army Marine Corps
Air Force	Imagery Production	Marine Corps

APPENDIX C

INDIVIDUAL TRAINING FACILITIES AT MAJOR LOCATIONS
BY TRAINING CATEGORY, FY 1988

A. Recruit Training

Facility Location	Student Workload	Training Staff E/S a/ Military	Civilian
Army			
Fort Dix, NJ	5,133	1,039	15
Fort Jackson, SC	5,832	1,122	32
Fort Knox, KY	2,355 b/	499	31
Fort Leonard Wood, MO	3,091	748	29
Fort McClellan, AL	1,451	291	8
Fort Sill, OK	489	209	-
Fort Polk, LA	709	249	24
Navy			
Great Lakes, IL	6,481	578	6
Orlando, FL	5,335	508	-
San Diego, CA	4,849	452	14
Marine Corps			
Parris Island, SC	6,614	1,353	6
San Diego, CA	6,105	1,059	3
Air Force			
Lackland Air Force Base, TX	7,832	662	18

a/ Reflects manpower end strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support management headquarters, and base operating support.
b/ Includes ROTC basic camp workload.

B. Officer Acquisition Training

Facility Location	Student Workload	Training Staff E/S a/ Military	Civilian
Army			
Fort Benning, GA	475	70	9
Fort Monmouth, NJ	248	48	22
West Point, NY	4,847	721	22
Navy			
Annapolis, MD	4,328	287	330
Newport, RI	690	121	14
Pensacola, FL b/	335	-	-
San Diego, CA	352	12	2
Marine Corps			
Quantico, VA	388	245	3
Air Force			
Colorado Springs, CO	4,447	1,075	695
Lackland Air Force Base, TX	465	100	17

a/ Reflects manpower end strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, management headquarters and base operating support.

b/ Manpower not separately identified by training category in manpower documents.

C. Specialized Skill Training

Location	Student Workload	Training Staff E/S a/ Military	Civilian
[illegible]			
[illegible]			
[illegible] Moving			
[illegible], MS	3,993	1,117	207
Charlottesville, VA	161	30	0
[illegible] VA	1,932	304	41
[illegible] GA	3,529	1,065	83
[illegible] Harrison, IN	3,809	609	124
[illegible], TX	2,107	913	248
[illegible], NC	1,348	609	124
[illegible], MA	1,354	751	184
[illegible], NJ	2,614	456	5
[illegible] Lustis, VA	2,965	1,008	248
[illegible] Gordon, GA	8,059	1,802	702
[illegible] Huachuca, AZ	1,479	554	138
[illegible] Jackson, SC	3,597	761	66
[illegible] Knox, KY	2,642	1,065	248
[illegible], VA	5,016	913	124
[illegible] Wood, MO	2,648	1,017	165
[illegible] McClellan, AL	2,318	761	124
[illegible] Rucker, AL	1,311	432	124
[illegible] Sam Houston, TX	5,761	728	39
[illegible] Leavenworth, KA	901	152	11
[illegible] Sill, OK	3,971	1,015	289
Fort Monmouth, NY	183	152	41
[illegible], CA	4,260	152	868
[illegible] Arsenal, AL	1,474	761	289
[illegible], IL	266	--	65
[illegible] Army Depot, IL	94	--	50
[illegible], TX	305	--	37
[illegible] Creek, VA	29	152 b/	15
[illegible] AFB, TX	--	30 b/	--
[illegible] Army Medical Center	1,680	46	--
[illegible] Aurora, CO	243	33	20
[illegible] Medical Centers/Hosp.	554	154	--

a/ Reflects manpower end strength (E/S) to include instructors, school/training center staffs, student supervisors. Excludes training support, management headquarters and base operating support.
b/ Instructors assigned to training facilities of another Service.

C. Specialized Skill Training (continued)

Facility Location	Student Workload	Training Staff E/S a/ Military	Civilian
Navy			
Athens, GA	367	59	12
Bangor, WA	524	483	21
Bethesda, MD (Medical)	112	37	-
Charleston, SC	787	528	8
Dam Neck, VA	2,312	1,442	36
Great Lakes, IL	9,872	1,636	80
Great Lakes IL (Medical)	843	122	-
Groton, CT	2,098	939	7
Groton, CT (Medical)	64	17	-
Gulfport, MS	524	130	11
Idaho Falls, ID	734	649	-
Indian Head, MD	317	105	6
Jacksonville, FL	294	301	-
Lakehurst, NJ	577	206	28
Little Creek, VA	684	153	9
Mayport, FL	264	122	2
Memphis, TN	7,879	941	77
Meridian, MS	998	145	10
Newport, RI	938	432	11
Norfolk, VA	1,948	1,228	24
Oakland, CA	55	10	8
Orlando, FL	5,251	794	13
Panama City, FL	264	191	6
Pearl Harbor, HI	315	244	8
Pensacola, FL	2,098	808	31
Pensacola, FL (Medical)	60	9	-
Philadelphia, PA	420	60	3
Port Hueneme, CA	684	189	11
Portsmouth, VA (Medical)	181	42	-
San Diego, CA	8,878	3,576	149
San Diego, CA (Medical)	1,152	129	-
San Francisco, CA	629	168	-
Schenectady, NY	1,047	770	-
Vallejo, CA	1,311	569	12
Windsor, CT	264	194	-
Whidbey Island, WA	212	148	2

a/ Reflects manpower end strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, management headquarters and base operating support.

C. Specialized Skill Training (continued)

Facility Location	Student Workload	Training Staff E/S a/ Military	Civilian
Marine Corps			
Albany, GA	45	30	1
Camp Lejeune, NC	2,606	1,112	59
Camp Pendleton, CA	1,338	678	4
Parris Island, SC	103	15	-
Quantico, VA	894	877	31
San Diego, CA	238	64	-
Twentynine Palms, CA	1,606	631	112
Air Force b/			
Chanute Air Force Base, IL	4,576	356	226
Fairchild Air Force Base, WA	281	345	22
Goodfellow Air Force Base, TX	1,630	239	75
Homestead Air Force Base, FL	70	101	2
Keesler Air Force Base, MS	6,012	488	320
Lackland Air Force Base, TX	2,266	255	97
Lowry Air Force Base, CO	4,644	559	223
Peterson Air Force Base, CO	168	12	-
Sheppard Air Force Base, TX	6,005	483	327

a/ Reflects manpower end strength (E/S) to include instructors, school/training center staffs, student supervisors. Excludes training support, management headquarters and base operating support.

b/ Includes Active AF, Civilian, ARF & Others; does not include field or contract training.

D. Flight Training

Facility Location	Workload	Training Staff E/S a/ Military	Civilian
Army			
Fort Rucker, AL	1,813	1,359	437
Navy			
Chase Field, TX	195	174	38
Corpus Christi, TX	342	209	6
Kingsville, TX	195	176	32
Meridian, MS	168	163	28
Pensacola, FL	824	719	70
Whiting Field, FL	1,073	547	16
Air Force			
Columbus Air Force Base, MS	393	327	19
Lackland Air Force Base, TX	54	11	45
Laughlin Air Force Base, TX	404	330	19
Mather Air Force Base, CA	986	372	22
Randolph Air Force Base, TX	129	172	12
Reese Air Force Base, TX	369	324	19
Sheppard Air Force Base, TX	311	171	-
Vance Air Force Base, OK	365	327	19
Williams Air Force Base, AZ	469	377	19

a/ Reflects manpower end strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, management headquarters and base operating support.

F. Professional Development Education

Facility Location	Workload	Training Staff E/S a/ Military	Civilian
Army			
Carlisle Barracks, PA	252	31	35
Fort Belvoir, VA	245	81 b/	174
Fort Bliss, TX	590	146	25
Fort Leavenworth, KA	796	259	157
Fort McNair, DC	337	48 c/	22
DoDCI, Navy Yard, D.C.	403	20 d/	17
Navy			
Monterey, CA	1,972	35	224
Newport, RI	740	68	32
Norfolk, VA	306	27	50
Marine Corps			
Quantico, VA	327	359	70
Camp Lejeune, NC	33	12	-
Air Force			
Bolling AFB, DC	9	21	2
Gunter Air Force Station, AL	191	53	8
Maxwell Air Force Base, AL	1,507	533	155
Wright-Patterson Air Force Base, OH	1,392	301	265

a/ Reflects manpower end strength (E/S) to include instructors, school/ training center staffs, student supervisors. Excludes training support, management headquarters and base operating support.
b/ 28 Army, 45 Other Services
c/ 19 Army, 29 Other Services
d/ 6 Army, 14 Other Services

F. One-Station Unit Training (OSUT)

Facility Location	Student Workload	Training Staff E/S a/ Military	Civilian
Army			
Fort Benning, GA	6,495	2,738	174
Fort L. Wood, MO	1,817	740	42
Fort Sill, OK	2,652	1,406	55
Fort McClellan, AL	2,012	666	42
Fort Knox, KY	2,474	1,628	221

a/ Reflects manpower end strength (E/S) to include instructors, school/ training center staffs, and student supervisors. Excludes training support, management headquarters, and base operating support.

APPENDIX D

SUMMARY OF TOTAL FUNDING FOR INDIVIDUAL TRAINING AND EDUCATION, BY SERVICE AND APPROPRIATION, FY 1986-89
($ millions)

Appropriation	FY 86	FY 87	FY 88	FY 89
Army				
Operations and Maintenance	$2,128.8	$2,309.0	$2,367.1	$2,494.9
Military Personnel	4,132.1	4,417.3	4,480.7	4,462.4
Reserve Personnel	290.1	279.8	301.3	320.9
National Guard Personnel	390.9	383.2	408.5	435.1
Aircraft Procurement	186.9	61.2	188.7	123.1
Missile Procurement	0.9	0.7	1.8	1.8
Procurement Weapons and Tracked Combat Vehicles	28.0	31.1	24.8	26.4
Other Procurement	51.9	45.0	67.3	56.7
Military Construction	226.2	199.2	119.3	133.5
Total Army	$7,435.9	$7,726.4	$7,959.5	$8,054.7
Navy				
Operations and Maintenance	$1,250.1	$1,326.4	$1,421.2	$1,555.5
Military Personnel	3,097.8	3,086.0	2,985.1	2,950.9
Reserve Personnel	131.8	100.9	112.5	116.1
Aircraft Procurement	162.0	134.9	421.9	460.9
Other Procurement	148.0	183.3	102.8	149.6
Military Construction	141.9	96.8	135.0	196.7
Total Navy	$4,931.7	$4,928.4	$5,178.6	$5,429.7
Marine Corps				
Operations and Maintenance	$ 156.4	$ 174.9	$ 184.4	$ 186.4
Military Personnel	926.5	963.5	1,028.2	991.6
Reserve Personnel	63.4	55.7	54.0	54.0
Procurement	6.7	9.2	5.4	14.2
Total Marine Corps	$1,153.0	$1,203.3	$1,272.3	1,246.2

Appropriation	FY 86	FY 87	FY 88	FY 89
	Air Force			
Operations and Maintenance	1,083.1	1,166.3	1,100.2	1,163.5
Military Personnel	2,557.1	2,629.4	2,563.2	2,666.0
Reserve Personnel	60.4	60.0	60.2	60.2
National Guard Personnel	94.2	85.2	89.1	92.4
Aircraft Procurement	263.9	80.9	81.3	131.6
Other Procurement	23.3	37.4	32.2	33.7
Military Construction	96.1	64.7	127.8	104.0
Total Air Force	4,178.1	4,123.4	4,054.0	4,251.5
Total Department of Defense	17,698.7	17,982.0	18,464.6	18,982.1

Note: Totals may not add due to rounding. These totals exclude funding for individual education and training programs for which loads are not requested and for which funds were not shown in the funding tables in Chapter IX (e.g., ROTC).

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